Adeloye R.A

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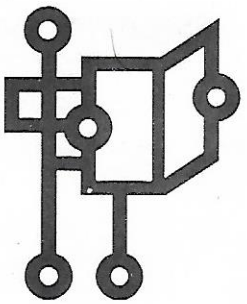

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BRIEF HISTORY OF THE JOURNAL

At the 7th Annual General Meeting of the National Research and Development Network of Children and Youth in Agriculture Programme (CY AP-Network: visit our website www.cyiapnetwork.org for more information) held at Tai Solarin University of Education, Ijagun, Ijebu-Ode, Nigeria on the 28th November, 2006, it was resolved that a journal named Annals of Child and Youth Studies (ACYS) of the Network be established Dr Dixon Olutade Torimiro, an Associate Professor in the Department of Agricultural Extension and Rural Development, Obafemi Awolowo University, Ile-Ife, Nigeria was unanimously appointed as the Editor-in-Chief and the Department was chosen as the Editorial Office of the Journal

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CONTENTS

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Vol. 6 (1) pp. 1 - 10

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ASSESSMENT OF RURAL CHILDREN'S INVOLVEMENT IN AGRICULTURAL ACVITIES IN OSUN STATE, NIGERIA

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The study assessed rural children involvement in various agricultural activities in the study area. Multi-stage sampling technique was employed to select 150 respondents randomly in the study area. Descriptive statistics such as percentage, means, frequency counts were used to summarize the data collected while inferential statistics such as chi-square (x^2), Pearson product moment correlations were used to analyse the data gathered. Available data showed that the mean age of the children was 14.23 and 61.3 percent were males while 38.7 percent were females. Majority (64.0%), were Christians and 35.3 percent were Muslims with 45.3 percent in primary schools and 50.7 percent in secondary schools. More than half of the children (55.3) did engage in marketing of raw and processed farm produce. Other major activities which they involved in were land clearing (30.7%) ridging (24.0%), planting (7.3%), weeding (43.3%), firewood gathering (39.3%), fertilizer application (48.0%), harvesting (6.7%), spraying of chemicals (25.3%), livestock rearing and management (45.3%) and storage of farm produce (42.7%). The major constraint identified by the farm children were tediousness drudgery of farm works (34.7%), lack of modern farm machineries (19.3%) and farm work hazard (13.7%). Chi-square (x^2) analysis showed a significant relationship between the farm children's involvement in agricultural activities and age (x^2 2.347, P 0.024), sex (x^2 2.467, P 0.031). There were significant correlation (r) between household size of parents (r 0.156, P - Val 0.003) and farming experience of the children (r 0.133, P - Value 0.012) and children's involvement in agricultural activities. It was concluded that age, sex, household size of parents and farming experience of the children played significant parts in children involvement in agricultural activities.

Keywords: *Involvement, Farm children, Agricultural activities, Assessment*

INTRODUCTION

Agriculture cannot be left in the hands of aged farmers: if we really want to increase productivity and enhance food security. This is because the issue of food sufficiency and security is germane to the survival of the human race. Therefore the involvement of farm children in agricultural activities is much more important in order for them to succeed their aged parents after death or when they are too old to work. Farm children should therefore be highly encouraged so far as it does not turn into child labour. There are lots of benefits accruable to farm children's involvement in agricultural activities, some of these are: food security, reduction in the rate of migration to cities: contribution to family livelihood: provision of opportunities to learn and practice useful livelihood skills: promotion of cultural identity, increase understanding of community traditional knowledge: prevention of idleness, promotion of self-actualization and accomplishment and increase in family. Rural children are children who live in rural areas and mainly children of farmers. International labour organization (ILO) (2010a) stated that 60 percent of all children aged 5 – 17 are into agriculture and this amounts to 70 million children worldwide. Food and Agriculture Organization (FAO) (2013) buttressed the fact by saying that of the 215 million child workers worldwide in 2008 about 60 percent or 129 million children were engaged in the agriculture sector. However, the work done by these children are not included in employment statistics. So, the policy makers have little knowledge about the roles they played. Government wants to bring children into economic mainstream and also wants them to take part in Agricultural activities (Oluyide and Ojo, 2011), but only when they are identified as active participants in agricultural and rural development programmes by integrating them in the national agricultural policy can government can achieve her aim. Assessing their involvements in various agricultural activities is then the major focus of this study. The study tried to find out the percentage of girls to boys' involvements in various agricultural activities and this will be useful in developing gender specific policies. Also, identifying constraints being faced by farm children will also aid children development programme such as children in agriculture (CIAP) which focuses at building capacity in children for favourable disposition and future profitable investment in Agricultural occupation thereby ensuring continuity and sustainability of farming as a reputable profession (Torimiro, 1995 and Adedoyin, 1999). Some scholars believe that children's interest in farming activities is rapidly diminishing (Akinkunmi and Williams, 1997). Some scholars also believe that lack of interest in agriculture shown by rural children is due to inadequate and improper

integration of children into agricultural policy of the Nation (Auta, 1999). These are findings in the past decade, so, it is highly expedient in this millennium to find out if rural children are still involved in agricultural activities. Hence, the following research questions: What are those agricultural activities available to farm children to be involved in? To what extent do the children involve in these activities? What are the reasons which made them to be involved in these activities? What are the constraints associated with children's involvements in agricultural activities? In order to proffer answers to these questions, the study assessed the involvements of rural children in agricultural activities. Specifically, the study identified the agricultural activities available to farm children to be involved in; determine the extent to which these children are involvedinthese activities; examine reasons which engendered them to involve in these activities; and identified constraints encountered by farm children in the course of involving in these activities. The hypothesis stated in the null form was tested: there is no significant relationship between some personal and socio-economic characteristics of farm children and their involvements in agricultural activities.

METHODOLOGY

The study was conducted in Osun State, Nigeria. The population for the study consists of children helping their parents on the farm. A multi-stage sampling procedure was employed to select 150 farm children. The study area consist three Agricultural Development Programmes (ADP) zones and these are Iwo, Ife-Ijesa and Osogbo zones. From each of the zones, 2, 3 and 4 blocks were proportionately selected, i.e. 2 blocks from Iwo, 3 blocks from Ife-Ijesa and 4 blocks from Osogbo. Farm children whose parents were predominantly farmers were randomly selected from the blocks selected. In all, 34 children from Iwo, 50 children from Ife-Ijesa and 66 children were proportionately selected for the study. The farm children selected for the study were interviewed on personal characteristics and their involvements in their parents' major occupation, i.e. farming. The interview schedule was validated through content validity with the objectives taking into consideration primary data used for the study were collected through the administration of interview schedule tailored towards realizing the objectives of the study variables measured included the personal characteristics of the children, involvement of the children in agricultural activities, reasons which made them to be involved in varying degrees and constraints encountered by farm children in agricultural activities. Descriptive statistical tools were used to summarize the personal characteristics of the respondents. Pearson product moment correlation

(PPMC). Chi-square (X^2) were used to test the hypotheses of the study.

RESULTS AND DISCUSSION

Personal, socio-economic characteristics of farm children

The data in Table 1 revealed that 40 percent of the farm children were within the age range of 15 to 18 years and the mean age of the respondents was 14.23. The finding is in line with CODESRIA (1997) which says that demographic profile of most African Countries shows 40% of the which population which are of age 15 are into farming. This implies that the children were old enough to be involved in most of the agricultural activities which their parents engaged in. Majority (61.3%) were male while most (64.0%) were Christians with 45.3% in primary schools and 50.7% in secondary schools, while only 4.0 percent did not go to school. Available data further showed that 56.0 percent of the farm children's had household size of between 5 and 10 and 18.7 percent had more than 10 household members. The impulse of these findings was that parents of the farm children had large household members which could assist them in agricultural activities. About 64.0 percent had between 5 and 10 years of farming experience while 8.7 percent had more than 10 years of farming experience. This suggests that these farm children have been involving in agricultural activities in the last 5 – 10 years and have been contributing to family labour force and consequently combating food insecurity. These findings are in agreement with the ILO (2009) who observed that in Nigeria, an estimated 12 million children participated in various categories of work including agriculture.

The extent of involvement in agricultural activities

As shown in Table 2, 30.7 percent of farm children were always involved, 44.0 percent occasionally and 25.3 percent sparingly involved in land clearing. More than half of the farm children (54.7%) did not involve in ridges making. 35.3 percent did always involve in planting, while 36.7 did not involve in planting at all. Weeding was always done by 43.3 percent and 46.7 percent did occasionally involve in weeding. Fertilizer application was always the work of 43.0 percent. Almost half of the farm children (46.7%) did not involve in herbicides' application. Harvesting of farm produce was always the activity of 54.7 percent of the farm children, while 45.3 percent of the farm children occasionally did involve in processing of farm produce. Furthermore, storage of farm produce was an agricultural activity which 42.7 percent of farm children always involved in and 48.7 percent occasionally involved in. Marketing of raw and processed products was the work of 55.3 percent of farm children. Farm children engaged themselves always and occasionally in livestock rearing and management with 45.3 percent and 42.6 percent respectively.

The findings show that fairly moderate number (48.7, 55.3, 45.3 etc.) of farm children always involved in weeding, fertilizer application, harvesting, storage, marketing and livestock's rearing and management.

Reasons which engendered farm children's involvement in agricultural activities

The result in Table 3 revealed that parental influence was a very strong reason why 60.0 percent farm children were actively involved in agricultural activities. Close to this reason is another very strong reason, which was family farm size as indicated by 36.7 percent of the respondents. Some of the weak reasons were personal interest (40.0%), family background size (65.3%). The implication of these findings was that parents had influence on children's involvement in one agricultural activity or the other. The strong reason of parental influence is supported by Ajayi and Torimiro (2004) who found that parents everywhere would naturally encourage their children to be trained to participate in their vocation.

Constraints associated with children's involvement in agricultural activities

In Table 4, 34.7 percent of the farm children indicated that tediousness and or drudgery associated with farm works was the major constraint, while 19.3 percent indicated that the lack of modern farm machineries was the constraint militating against their involvement in agricultural activities. Farm works' hazards ranked third, other constraints were inadequate rural infrastructures (13.3%), inadequate storage facilities (6.7%); lack of interest in agriculture (4.0%) and poor extension visits (3.3%). These findings suggest that all these constraints reduce farm children's involvement in agricultural activities.

Relationships between selected personal characteristics and involvements of farm children in agricultural activities

Results of chi-square (X^2) analysis were presented in Table 5, sex and age had significant relationships with the involvements of farm children in agricultural activities with sex (X^2 = 2.467, P = 0.031) and age (X^2 = 2.347; P = 0.024). The implication of these findings was that the sex of farm children determined the type of agricultural activities they involve in and the older they are, the greater their involvement in agricultural activities. Also, the result of correlation shows significant negative relationships between household size of parents of farm children (r = 0.156; P = 0.003); and their involvement in agricultural activities as shown in Table 6. The implication of these findings was that the smaller the size of household of parents of farm children, the greater their involvements in agricultural activities and "vice versa". Farming experience of farm children had positive relationship (r = 0.133; P 0.018) which implies that the greater

the farming experience of farm children, the greater their involvements in agricultural activities and "vice versa".

CONCLUSIONS AND RECOMMENDATIONS

The study assessed the rural children's involvement in agricultural activities. It was established that rural children involved in different agricultural activities. However, rural children were always involved in harvesting of farm produce, fertilizers application, marketing of raw processed products, livestock rearing and management and weeding to a large extent. Parental influence was a very strong reason why rural children were involved in agricultural activities. It was also found that there was a significant relationship between sex and age of farm children and their involvement in agricultural activities. Also, farming experience of children had positive significant relationship with their involvements in agricultural activities. All these variables therefore played a significant role in rural children's involvements in agricultural activities. An inverse relationship was established between household size of parents of farm children and their involvement in agricultural activities.

The following recommendations are made based on the outcomes of the study:

1. Parents should not relent on their effort to continue to encourage their children, so that soonest: all these agricultural activities will be performed independently by them.
2. Modern farm machineries, which can reduce drudgery or tiredness, should be made available to farm children.
3. Parents of farm children should encourage their children to operate on their own by personally possessing farmlands of their own.
4. Government should provide the basic amenities, infrastructure for the rural dwellers to avoid rural-urban migration.
5. The farm children should be identified as active participant in Agriculture and rural development programs and they should also be integrated into national Agricultural policy.
6. Incentive should be given to farm children who engage in agricultural activities and still perform well in their education

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Table 1: Percentage distribution of respondents by personal characteristics

Variables	Frequency	Percentage	SP
Age (in years)			
6 – 10	18	12.0	
11 – 14	56	37.3	$\overline{X}$ =
15 – 18	60	40.0	14.23
Above 18	16	10.7	
Sex			
Male	92	61.3	
Female	58	38.7	
Religion			
Islam	53	35.3	
Christianity	96	64.0	
Others	01	0.7	
Educational level			
Primary education	68	45.3	
Secondary education	76	50.4	
No formal education	06	4.0	
Household size of parents			
1 – 4	38	25.3	
5 – 10	84	56.0	
Above 10	28	18.7	
Farming experience (years)			
1 – 4	41	27.3	5.04
5 – 10	96	64.0	2.41
Above 10	13	8.7	

Source: Field Survey, 2015

Table 2: Distribution of respondents based on the extent of involvement in agricultural activities

Agricultural activities	Always involved Freq.%	Occasionally involved freq.%	Do not involve Freq.%
Land clearing	46.31	66.44	38.25
Making ridges	36.24	32.21	82.55
Planting	53.35	42.28	55.37
Weeding	65.44	70.47	15.10
Fertilizer application	72.48	46.31	32.21
Herbicides application	38.25	42.28	70.47
Harvesting of farm produce	82.55	53.35	15.10
Processing of farm produce	45.30	68.45	37.25
Storage of farm produce	64.43	73.49	13.90
Marketing of raw and processed products	83.55	52.35	15.10
Firewood gathering	59.39	71.47	20.13
Livestock rearing and management	68.45	64.43	18.12

Source: Field Survey, 2015

Table 3: Reasons that engender farm children's involvement in Agricultural activities

Reasons	Weak	%	Fairly strong	%	Very strong	%
Parental influence	20	13.3	40	26.7	90	60.0
Personal interest	60	40.0	52	34.7	38	25.3
Family background size	98	65.3	35	23.3	22	14.6
Family farm size activities	53	35.3	42	28.0	55	36.7
Availability of time	59	39.3	61	40.7	30	20.0

Source: Field Survey, 2015

Table 4: Constraints associated with farm children's involvement in agricultural activities

Constraints	Frequency	Percentage
Tediousness/drudgery associated with farm works	52	34.7
Farm works hazards	28	18.7
Poor extension visits	05	3.3
Lack of modern farm machineries	29	19.3
Inadequate rural infrastructures	20	13.3
Inadequate storage facilities	10	6.7
Lack of interest in Agriculture	06	4.0
Total	**150**	**100.00**

Source: Field Survey, 2015
Multiple responses were given

Table 5: Relationship between respondents' personal characteristics and their involvement in Agricultural activities

Characteristics	X^2 value	Df	P-value	Decision
Sex	2.467	2	0.031	S
Age	2.347	5	0.024	S
Educational level	4.467	4	0.818	NS
Religion	10.82	3	0.11	NS

*Source:*Field Survey, 2015. NS = Not Significant, S = Significant

Table 6: Results of correlation test showing the relationship between the personal characteristics of the children and their involvement in agricultural activities

Variables	r-value	p-value	Decision
Household size of parents	-0.156	0.003	Significant
Farming experience of children	0.183	0.018	Significant

Significant at $P \leq 0.05$

Source: Field Survey, 2015

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Vol. 6 (1), pp. 11 - 20
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PROMOTING HEALTH AND WORKPLACE SAFETY AMONG INTERNSHIP STUDENTS OF AGRICULTURE IN OBAFEMI AWOLOWO UNIVERSITY: AN EMPHASIS ON PROTECTIVE GEARS

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The study focused on health and workplace safety among internship students of Agriculture in Obafemi Awolowo University, Ile-Ife with an emphasis on protective gears. Two hundred and one purposively selected interns formed the population for this study. Structured questionnaire was used to elicit information from the respondents. Data collected were analysed using frequency and percentages and inferential statistics. The results revealed that 71.1 percent of the respondents were between the age bracket of 21 and 25 years. The mean age of the respondents was 24.35 and standard deviation was 4.67. The result also shows that all (100%) of the respondents were involved in all agricultural activities on the farm. The result further shows that 99.0 percent of the respondents have been exposed to cuts, 82.6 percent stings and bites, 100 percent allergies and excessive heat from the sun . The result also shows that 100 percent of the respondents wore overall and rain boots, 57.2 percent caps hats and 63.2 percent used hand gloves. However, none of the respondents (0%) used respiratory protector and face shield or safety goggles. The Chi-Square analysis revealed that there were significant association between incidence of hazard and sex (^{X2}-0.032, $p<0.05$) and farming experience (^{X2}-0.001, $p<0.05$). It is concluded that respondents were under-protected. It is therefore recommended that the use of adequate protective gears should be emphasised to reduce the incidence of hazards on the farm, to encourage more youths to go into Agriculture and to ensure health and safety of the students who would want to go into Agriculture after graduation.

Keywords: *Health, workplace safety, internship students, agriculture, protective gears*

INTRODUCTION

As work provides many economic and other benefits, so also it presents a wide range of workplace hazards to the health and safety of the worker. Muhammed (2009) defined occupational safety and health as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of worker taking into account the possible impact on the surrounding communities and the general environment. According to the International Labour Organization (International Labour Organisation, 2000), the agricultural sector is one of the most hazardous to health worldwide arising from the use of various implements, chemicals and farm machines. Agricultural work possesses several characteristics that are risky for health such as exposure to the weather, close contact with animals and plants, extensive use of chemical and biological products, difficult working postures and lengthy hours, as well as the use of hazardous Agricultural tools and machinery (International Organisation for Standardization, 2013). As a result of these numerous hazards in agriculture, personal protective equipment should be an important part of every

farm's safety program to reduce the hazard to acceptable levels.

Various agricultural activities put considerable strain on farmers' bodies and minds in a variety of ways, leading to unnecessarily high incidences of pain, discomfort, injury, and illness, as well as direct and indirect losses to the farmers' productive capacity as productivity could be linked with the health of the worker (Alavanja *et al,* 2004). Manoj (2013) is of the opinion that the world population is expected to grow by 50 percent over the next 50 years to 9 billion people and world food demand is expected to double by 2050 and the proportion of active work force in agricultural production is under 49 percent worldwide with 10 percent in developing countries. This has prompted an increased focus on diverse programs to encourage more people to go into Agriculture to ensure food security of the households. It is against this backdrop that internship students of agriculture are exposed to an experience scheme involving practical knowledge of agricultural operations, geared towards developing the occupational competencies that prepare individuals for employment opportunities after graduation are incorporated to the curriculum to replace the ageing farm labour.

During this period, students are involved in various agricultural operations such as land clearing, planting crops, weeding, mixing and spraying of chemicals, driving of tractors and as suppliers of food crops, processors of food products and

marketers of these products thereby making transition from school to the world of work easier and enhance students contact for later job placement. These agricultural operations pose a lot of risks to the health of these agrarians which could be reduced to an acceptable level using protective gears. Protective gears according to Truong (2008) are garments and other fabric-related items intended to protect the wearer from harsh environmental effects that may result in injuries or death. These gears create a physical barrier between the hazard and the user therefore, proper and adequate protective gears are desirable during agricultural operations (Duncan *et al*, 2011).

Batawi (2004) believes that the most important protective clothing is the long-sleeved coverall gear made from a tightly woven lighter-weight fabric that would offer a degree of protection for any type of hazard. The material may be breathable to allow moisture vapor from perspiration to escape in order to reduce heat and windproof to block the wind and keep the wearer warmer and protected. The coveralls are elasticized at the waist with a long zipper to the crotch for on/off conveniences. In addition, seamless shoulder and sleeve tops help provide increased comfort and fewer potential entry points for contaminants (Elias, 2015). Today, the hazards that farmers are exposed to are often so specialized that no single type of gear will be adequate for protection. Therefore, other protective gears such as rain boots, nose guard/nasal protector, cap/hat, and safety goggles or face shield that could prevent, control, reduce or eliminate occupational hazards are important.

Clothing evaluation studies have shown that protective gears and coveralls of various materials and designs have been effective in reducing exposure to hazards (Atreya, 2007). Although it is not possible to eliminate all the risks and hazards associated with farming due to various activities farmers engaged in on the farm however, much can be done to protect the farmers from the hazards to which they might be exposed in the course of their farming activities (Elias, 2015). There is an urgent need to document the incidence of occupational injuries and the prevalence and incidence of work-related hazards within internship period. This study investigated health and workplace safety with an emphasis on the protective gears for a sustainable production in Agriculture and a healthy, productive workforce. The paper hopes to specifically examine socio-economic characteristics of internship students; identify agricultural operations engaged in; assess hazards exposure of internship students on the farm and the protective gears worn by these students to reduce job-related risks on the farm. The study hypothesized that there is no significant relationship between socio-economic

characteristics of respondents and the incidence of hazard on the farm.

.METHODOLOGY

The study was carried out among internship students of Agriculture in the Teaching and Research Farm of the Obafemi Awolowo University, Ile-Ife which consists of approximately 1,400 hectares of land and it is eight kilometers north of the Faculty of Agriculture buildings. Internship aims at promoting practical skill acquisition and experiences in agriculture to complement the theoretical knowledge acquired in the class with practical experience so as to make the transition from the university to the world of work easier, and thus enhancing student's contacts for later job placement. The Population comprised all interns for the 2015/2016 academic session and since the study under investigation targeted only internship students, all the interns (201) were interviewed. Information such as age, sex, farming exposure, agricultural activities of respondents on the farm, hazard experience of interns and the type of protective gears worn on the farm were elicited from respondents using structured questionnaire. To measure the degree of exposure to hazard, a number of effects were ranked from 1- 10 and multiple choices allowed. Data collected were analysed using frequency and percentages and inferential statistics as Chi Square was used to test for any significant association between the respondent's personal characteristics and incidence of hazard on the farm.

RESULTS AND DISCUSSION

Socio-economic characteristics of respondents are presented in Table 1. The result revealed that more than half (71.1%) of the respondents were between the age bracket of 21 and 25 years. This depicts that respondents were mostly youths and in their active age. Sex of the respondents showed that 54.2 percent were males while 45.8 percent were females. This implies that males constituted a slightly higher percentage compared to females. This is not unconnected to the fact that agricultural activities are considered masculine in nature and that men are more energetic compared to female gender. This indicates that Agriculture is regarded as male domain profession. More than half (61.7%) of the respondents were Christians while 38.3 percent were Muslims. Farming exposure revealed that 76.6 percent had low farming exposure which might make the respondents more susceptible to hazards when working on the farm. A plausible explanation could be that many of the respondents might have no farming background and live in urban centres.

Data in Table 2 showed that all the respondents (100%) were involved in all agricultural activities on the farm. Such activities included land clearing, planting of crops, weeding and assessment of potency of chemical mixtures. Also, 100 percent of

respondents were involved in the application of fertilizer and herbicides, harvesting, processing of harvested crops and livestock production. Further investigation shows that all (100%) of the respondents were involved in sales of farm produce and driving of the tractor. This implies that gender is not a barrier to respondent's involvement in any of the agricultural work and this is an indication that respondents would have been exposed to a number of hazards when working on the farm. This corroborates the assertion of (Adeokun, 2006) that these agricultural activities expose students to work methods and techniques in handling equipment and machinery and provide students with an opportunity to apply their theoretical knowledge in real work situation, thereby bridging the gap between theory and practice.

Table 3 provides information on a number of hazards respondents were exposed to when working on the farm. From the Table, all (100%) of the respondents had been exposed to allergies arising from coming in contact with plants during weeding operations, exposure to extreme heat during hot seasons and inhalation of chemicals respectively. Ninety nine percent of the respondents had been exposed to cuts from sharp objects, 90.5 percent slips and falls and 90.5 percent had been exposed to slips and falls. Stings and bites from insects ranked sixth with 82.6 percent, 36.8 percent of the respondent had assessed potency of chemical mixtures with the hand and 27.9 had suffered from musculoskeletal injury. This implies that a large percentage of respondents employed dangerous techniques to assess the potency of farm chemical mixtures which may result into injury. However, none (0%) of the respondents had stepped on thorns or any other sharp objects because of the use of rain boot as cautionary measure and none had been exposed to injury from the farm machines. Although respondents wore a number of protective gears that could reduce exposure to hazards, however, findings showed that respondents were susceptible to a number of hazards which in turn may discourage youths from practicing agriculture after school.

Data in Table 4 reveal the protective gears worn by the respondents to reduce or prevent hazard on the farm. From the Table, all the respondents (100%) wore overall/coverall and rain boots, 57.2 percent wore caps/hats as protective measure from the sun with 63.2 percent who wore hand gloves to applying chemicals. However, none of the respondents (0%) used nasal protector to prevent inhalation of chemical mixtures and face shield or safety goggles such as wrap-around lenses for the complete protection of the eyes. This is indication that respondents were exposed to the danger associated with the application of agrochemicals without provision of first aid to take care of emergency

situations. This might not be unconnected to the fact that respondents might be unaware of other protective gear that could reduce or prevent hazards during Agricultural operations.

Table 5 reveals the chi-square analysis of the respondents' socio-economic characteristics and incidence of hazards on the farm. From the Table, variables such as sex ($p<0.05$) and farming exposure ($p<0.05$) has significant association with incidence of hazard on the farm. This implies that males are less prone to hazard compared to females and inexperienced farmers are more susceptible to hazards compared to experienced farmers who have had adequate knowledge of farming activities that would enhance the control of hazards on the farm. The finding is at variance to the outcome of the research of Adeokun *et al* (2006) which states that no matter how long or short the farming experience, hazards would occur. This depicts that hazards could occur from any agricultural activities. However, there was no significant association between the respondents' religious affiliation ($p>0.05$) and incidence of hazard. This implies that irrespective of the religious affiliation, hazard could occur.

CONCLUSIONS AND RECOMMENDATIONS

The use of protective gears is paramount in achieving sustained decent working conditions and strong preventive safety on the farm now that the Nigeria's farm labour is ageing, with vast unemployed youths thererefore, engaging this young and vibrant population in agriculture with an emphasis on protective gears that would reduce or prevent hazard could encourage more youths to go into agriculture after graduation for food security. It is therefore recommended that efforts must be placed not only to provide additional knowledge on risks involved in agriculture but on the use of protective gears which would reduce the hazard exposure of farmers irrespective of the length of experience in the field of agriculture.

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Table 1: Distribution of respondents' according to socio-economic characteristics

Age (Yrs)	**Frequency**	**Percentage**
<20	01	0.5
21-25	143	71.1
26-30	57	28.4
	Mean=24.35	
	SD= 4.67	
Sex		
Male		54.2
Female		45.8
	109	
	92	
Religion		
Christianity		61.7
Islam		38.3
	124	
	77	
Farming exposure		76.6
Low		23.4
High	154	
	47	

Source: Field survey, 2015

Table 2: Distribution of respondents' according to activities exposed to on the Farm

Activities	Frequency	Percentage
Land clearing	201	100
Planting of crops	201	100
Weeding	201	100
Application of fertilizer	201	100
Assessing potency of chemical	201	100
mixtures	201	100
Application of herbicides/pesticides	201	100
Harvesting	201	100
Processing of crops	201	100
Livestock production	201	100
Sales of farm produce	201	100
Driving of tractor	201	100

Source: Field survey, 2015

Table 3: Distribution of respondents according to hazard exposed to

Hazard	Frequency	Percentage	Ranking
Allergies from plants	201	100	1st
Extreme heat	201	100	1st
Exposure to chemicals	201	100	1st
Cuts from sharp objects	199	99.0	4th
Slips and falls	182	90.5	5th
Stings and bites from insects	166	82.6	6th
Assessing potency of chemical			
Mixtures with the hand	74	36.8	7th
Musculoskeletal injury	56	27.9	8th
Stepping on thorns	0	0.0	9th
Injury from farm machinery	0	0.0	9th

Source: Field Survey, 2015

Table 4: Protective gears worn by respondents

Protective Gears	Frequency	Percentage
Overall/coverall	201	100
Rain boots	201	100
Cap/hats	115	57.2
Hand gloves	127	63.2
Nasal protector/Nose guard	0	0
Face shield/safety goggles	0	0

Source: Field Survey, 2015

Table 5: Chi- Square analysis of the respondents' socio-economic characteristics and incidence of hazard

Variable	χ^2-cal	χ^2-tab	*df*	P-value	Decision
Sex	52.67	6.345	1	0.032	S
Religion	65.45	15.74	3	0.625	NS
Farming Exposure	37.23	4.635	3	0.001	S

Source: Field Survey, 2015

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ANALYSIS OF CHILDREN'S INVOLVEMENT IN HOME GARDENING ACTIVITIES IN SOUTH-WESTERN, NIGERIA

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The study examined the involvement of children in Home Gardening activities in South-Western Nigeria. it specifically identify the types of home gardening activities practised in the study area; enumerate the social and economic benefits accrued from home gardening; identify various home gardening crops being cultivated in the study area, and examine the constraints encountered by the respondents in home gardening activities. A multi-stage sampling technique was adopted to select 120 respondents as samples for the study. Data collected were summarized using percentage, frequency counts while Regression analysis was used to determine the relationship between socio-economic characteristics of the respondents and their contributions to household gardening activities. Data analysed showed that 38.3 percent were between 15 and 18 years of age while 38.3 percent fell between age bracket of 11 to 14 years. Majority of the respondents (65%) were male while 55 percent were female only 34.2 percent practised Islamic religion while 65.0 percent practised Christianity. More than half of the respondents (58.3%) were in secondary schools while 24.2 percent were in primary school. Only 5.0 percent had no formal education while 12.5 percent were in tertiary institutions. Home gardening activitieswhich children involved much were manual weeding, harvesting and gathering of firewood with 75.0 percent, 64.2 percent and 54.2 percent respectively. Those home gardening activities dominated by female children were harvesting and seed preservation as indicated by 35.0 percent each. The perception of the respondents with regards to social and economic benefits were for food security, improve family nutrition and sources of vegetables and spices as indicated by 62.5 percent each. Some of the home gardening crops grown were plantain/banana (48.3%) pepper (43.3%), scent leaf (41.7%) and bitter leaf (40.0%). The major constraints encountered by the respondents were pilfering (65%); and time constraint (54.2%). The results of regression analysis showed that gender (sex) had positive sign of co-efficient and significant at 5% level. This implies that gender is a key factor to take into consideration in the involvement of home gardening activities. The interpretation

of this was that male dominated certain activities and female children dominated certain home gardening activities. It is recommended that more female children are incorporated into most of these home gardening activities.

Keywords: *Involvement, children, home gardening activities, farm household*

INTRODUCTION

Home gardening may be defined as a need oriented, intensive and integrated multi-species production system around the dwellings in small holdings aimed to achieve greater resource use efficiency with biological productivity and environmental sustainability (Poly-Mbah *et. al.*, 2009). This is because the home garden system is a self-provisioning system where the use of chemicals is minimal and the emphasis is more on homemade formulations of biological origin. Home gardening involves the cultivation of a combination of arable crops, vegetable, oil, fruit crops.

The functional diversity of the system helps to meet the many demands of food, fodder, fuel, timber, organic mulch and medicinal plants (Ninez, 1987).

The food requirements are met by crops such as coconut, banana, cassava, yams, taros, ginger, turmeric, pineapple, cashew, jack, mango and banana. Home gardening is also an oldest food production system characterized of composing food plants such as garden eggs, sweet potatoes, peppers, cassava, bananas, papayas and yams. Others are cocoyam, okra, spinach, maize and fruit trees such as mangos and guava (UNICEF, 1982). Marsh (1998) however, indicated that whether it is known as home, mixed, backyard, kitchen, farmyard, compound or homestead garden, the home gardening's main purpose is family food consumption that provides essential nutrients for the family diet. Thus, a household is food secured when it has access to food needed for a healthy life for all its members, adequate in terms of quality, quantity, socially and culturally acceptable and when it is not at risk of losing such access (UNO, 1991).

Statement of the problems

A home garden is typically a family activity involving men, women, children and elderly with some tasks carried out separately and others jointly. Hence, there is the need to encourage all members of the family to be involved in one agricultural activity or the other to attain food security in the country. Household members who are not farmers can take part in home gardening irrespective of the gender and generation to boost household food security and to provide additional income to the family. This study was carried out based on the

observations made by Nair (2011) that despite the importance of home gardening as an aspect of food production and a way of involving farm children in agriculture, scientific attention has seldomly focused on the involvement of children in home gardening activities.

Farming practices and production activities are transferred to children from generation to generation using old techniques (Wasson and Eyzaguirre, 2002; and Woldu, 2009). Thus, the extent of involvement of children in home gardening was assessed and the outcome of the study would not only benefit scientists but also decision-makers in agriculture in relation to farm children. The young ones could learn from the old generation and be adequately involved in home gardening activities. There is also inadequate quantitative and qualitative data on children's involvement in economic activities in terms of participation and decision-making especially in home gardening in Southwestern Nigeria. Hence, the following research questions:

1. What are the socio-economic characteristics of the respondents?
2. What are the land areas (in m^2) used for home gardening activities?
3. What are the types of home garden crops/enterprises the respondents are involved in?
4. What are the types of home gardening activities practised by the respondents?
5. What are the socio-economic benefits of home garden crops/enterprises to the respondents?
6. What are the constraints faced by the respondents in home gardening activities?

Objectives of the Study

The main objective of the study is to analyze children's involvement in home gardening activities in Southwestern Nigeria.

The specific objectives are to:

- describe the socio-economic characteristics of the respondents;
- estimate the land areas (in m^2) covered by these home gardening activities;
- identify different types of home garden crops/enterprises the respondents involved in;
- identify the types of home gardening activities practised by the respondents;
- enumerate the socio-economic benefits of home garden crops/enterprises to the respondents;
- examine the constraints faced by the respondents in home gardening activities.

Hypothesis

H_0: There is no significant relationship between socio-economic characteristics of respondents and their involvements in home gardening activities.

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METHODOLOGY

The study was carried out among internship students of Agriculture in the Teaching and Research Farm of the Obafemi Awolowo University, Ile-Ife which consists of approximately 1,400 hectares of land and it is eight kilometers north of the Faculty of Agriculture buildings. Internship aims at promoting practical skill acquisition and experiences in agriculture to complement the theoretical knowledge acquired in the class with practical experience so as to make the transition from the university to the world of work easier, and thus enhancing student's contacts for later job placement. The Population comprised all interns for the 2015/2016 academic session and since the study under investigation targeted only internship students, all the interns (201) were interviewed. Information such as age, sex, farming exposure, agricultural activities of respondents on the farm, hazard experience of interns and the type of protective gears worn on the farm were elicited from respondents using structured questionnaire. To measure the degree of exposure to hazard, a number of effects were ranked from 1- 10 and multiple choices allowed. Data collected were analysed using frequency and percentages and inferential statistics as Chi Square was used to test for any significant association between the respondent's personal characteristics and incidence of hazard on the farm.

RESULTS AND DISCUSSION

Socio-economic characteristics of respondents are presented in Table 1. The result revealed that more than half (71.1%) of the respondents were between the age bracket of 21 and 25 years. This depicts that respondents were mostly youths and in their active age. Sex of the respondents showed that 54.2 percent were males while 45.8 percent were females. This implies that males constituted a slightly higher percentage compared to females. This is not unconnected to the fact that agricultural activities are considered masculine in nature and that men are more energetic compared to female gender. This indicates that Agriculture is regarded as male domain profession. More than half (61.7%) of the respondents were Christians while 38.3 percent were Muslims. Farming exposure revealed that 76.6 percent had low farming exposure which might make the respondents more susceptible to hazards when working on the farm. A plausible explanation could be that many of the respondents might have no farming background and live in urban centres.

Data in Table 2 showed that all the respondents (100%) were involved in all agricultural activities on the farm.

Such activities included land clearing, planting of crops, weeding and assessment of potency of chemical mixtures. Also, 100 percent of respondents were involved in the application of fertilizer and herbicides, harvesting, processing of harvested crops and livestock production. Further investigation shows that all (100%) of the respondents were involved in sales of farm produce and driving of the tractor. This implies that gender is not a barrier to respondent's involvement in any of the agricultural work and this is an indication that respondents would have been exposed to a number of hazards when working on the farm. This corroborates the assertion of (Adeokun, 2006) that these agricultural activities expose students to work methods and techniques in handling equipment and machinery and provide students with an opportunity to apply their theoretical knowledge in real work situation, thereby bridging the gap between theory and practice.

Table 3 provides information on a number of hazards respondents were exposed to when working on the farm. From the Table, all (100%) of the respondents had been exposed to allergies arising from coming in contact with plants during weeding operations, exposure to extreme heat during hot seasons and inhalation of chemicals respectively. Ninety nine percent of the respondents had been exposed to cuts from sharp objects, 90.5 percent slips and falls and 90.5 percent had been exposed to slips and falls. Stings and bites from insects ranked sixth with 82.6 percent, 36.8 percent of the respondent had assessed potency of chemical mixtures with the hand and 27.9 had suffered from musculoskeletal injury. This implies that a large percentage of respondents employed dangerous techniques to assess the potency of farm chemical mixtures which may result into injury. However, none (0%) of the respondents had stepped on thorns or any other sharp objects because of the use of rain boot as cautionary measure and none had been exposed to injury from the farm machines. Although respondents wore a number of protective gears that could reduce exposure to hazards, however, findings showed that respondents were susceptible to a number of hazards which in turn may discourage youths from practicing agriculture after school.

Data in Table 4 reveal the protective gears worn by the respondents to reduce or prevent hazard on the farm. From the Table, all the respondents (100%) wore overall/coverall and rain boots, 57.2 percent wore caps/hats as protective measure from the sun with 63.2 percent who wore hand gloves to applying chemicals. However, none of the respondents (0%) used nasal protector to prevent inhalation of chemical mixtures and face shield or safety goggles such as wrap-around lenses for the complete protection of the eyes. This is indication that

respondents were exposed to the danger associated with the application of agrochemicals without provision of first aid to take care of emergency situations. This might not be unconnected to the fact that respondents might be unaware of other protective gear that could reduce or prevent hazards during Agricultural operations.

Table 5 reveals the chi-square analysis of the respondents' socio-economic characteristics and incidence of hazards on the farm. From the Table, variables such as sex ($p<0.05$) and farming exposure ($p<0.05$) has significant association with incidence of hazard on the farm. This implies that males are less prone to hazard compared to females and inexperienced farmers are more susceptible to hazards compared to experienced farmers who have had adequate knowledge of farming activities that would enhance the control of hazards on the farm. The finding is at variance to the outcome of the research of Adeokun *et al* (2006) which states that no matter how long or short the farming experience, hazards would occur. This depicts that hazards could occur from any agricultural activities. However, there was no significant association between the respondents' religious affiliation ($p>0.05$) and incidence of hazard. This implies that irrespective of the religious affiliation, hazard could occur.

CONCLUSIONS AND RECOMMENDATIONS

The use of protective gears is paramount in achieving sustained decent working conditions and strong preventive safety on the farm now that the Nigeria's farm labour is ageing, with vast unemployed youths therefore, engaging this young and vibrant population in agriculture with an emphasis on protective gears that would reduce or prevent hazard could encourage more youths to go into agriculture after graduation for food security. It is therefore recommended that efforts must be placed not only to provide additional knowledge on risks involved in agriculture but on the use of protective gears which would reduce the hazard exposure of farmers irrespective of the length of experience in the field of agriculture.

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	Mean=24.35 SD= 4.67	
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Male	109	54.2
Female	92	45.8
Religion		
Christianity	124	61.7
Islam	77	38.3
Farming exposure		
Low	154	76.6
High	47	23.4

Source: Field survey, 2015

Table 2: Distribution of respondents' according to activities exposed to on the Farm

Activities	**Frequency**	**Percentage**

Land clearing	201	100
Planting of crops	201	100
Weeding	201	100
Application of fertilizer	201	100
Assessing potency of chemical	201	100
mixtures	201	100
Application of herbicides/pesticides	201	100
Harvesting	201	100
Processing of crops	201	100
Livestock production	201	100
Sales of farm produce	201	100
Driving of tractor	201	100

Source: Field survey, 2015

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Source: Field Survey, 2015

Table 4: Protective gears worn by respondents

Protective Gears	Frequency	Percentage
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Source: Field Survey, 2015

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NUTRITIONAL STATUS OF RURAL CHILDREN IN NIGERIA: A CAUSE FOR CONCERN

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Nutrition plays a crucial role in child's development and children make up about 47 percent of Nigerian population. This article presents findings from over 20 articles reviewed on nutritional status and food requirements in rural households such as Osho (2006), Atkinson (2009) and FAO (2013). Drawing from many wstudies from different countries, it revealed that the nutritional situation has worsened over time for rural children and this calls for concern. This paper highlights basic causes of malnutrition, suggested way forward and also serves to provide a useful measure in overcoming the nutritional challenges in the rural areas especially interventions targeted at improving children nutritional status.

Keywords: *Nutrition, Children and Rural*

INTRODUCTION

Nutrition is of major importance as a determinant of health and productivity because it is necessary for energy, growth and repair, and regulation of body processes. Generally, it refers to whether or not one is eating the correct amounts and types of nutrients. It is defined according to medical dictionary as the state of the body with respect to each nutrient and to the overall state of the body weight and condition. Nutritional status can be determined by assessing several factors, including body composition and appearance, blood levels, existing conditions, and issues that may impact ones access to or ability to consume and absorb food. It includes the uptake of food, liberation of energy, elimination of wastes and the biochemical synthesis that are essential for maintenance of normal growth and development (Laditan, 1983). Nutritional and health status are powerful influences on a child's learning and how well a child performs in school. Children who lack certain nutrients in their diets (particularly iron and iodine), or who suffer from protein-energy malnutrition, hunger, parasitic infections or other diseases, do not have the same potential for learning as

healthy and well-nourished children (Ogunba *et al.*, 2007).

Children make up 47 percent of the total population of Nigeria and many of them are chronically hungry and malnourished (NPC, 2000). When talking of rural children, boys and girls are involved. The Children-in-Agriculture Programme (CIAP) classified children to include all categories of people with ages ranging from birth to 18 years (Adedoyin, 2005).

Child health and nutrition problems are amongst the most challenging in less developed countries an understanding of the nutritional status of children has far-reaching implications for better development planning and for the future of the current generations. It is imperative that the nutritional status of the rural children who ultimately will become future heads of their family and on whom the future of agriculture lies in the rural areas be given the necessary attention. Various child health indicators like under five-mortality rate, infant mortality rate, nutritional status, immunizations, and others can be used to reveal the remarkable state of health and general well-being of pre-school children. The mortality rate among children under five years of age is still relatively high and their nutritional status very poor and about half of all child deaths worldwide are associated with malnutrition (Bomela, 2007). Furthermore, about 75% of these deaths are linked not to severe malnutrition but to mild and moderate forms, and are concentrated in South Asia and sub-Saharan Africa (UNICEF, 2005). Nutritional deficiency is another factor contributing to the high rates of morbidity, mortality and disability in Nigerian children. Also children malnutrition is reported by the National Health Management Information System as a direct cause of death in about 2 percent of infant and under-five age groups mortality (Osho, 2006). Nutritional deficiencies can also have a synergistic relationship with other key illness affecting children such as malaria, acute respiratory track infections and measles. Poor child health and nutrition impose significant and long-term economic and human development costs, especially on the poorest countries and communities, further entrenching their status. In Nigeria, malnutrition is widespread in the entire country and rural areas are especially vulnerable to chronic food shortages, malnutrition, unbalanced nutrition, erratic food supply, poor quality foods, high food costs, and even total lack of food. This phenomenon cuts across all age groups and categories of individuals in the rural areas. Since majority (70 percent) of Nigerians live in rural areas, an analysis of the food and nutrition security status of rural dwellers will provide a clear picture of what needs to be done to assure food security in Nigeria with the attendant

improvements in nutrition status when all the other necessary conditions, such as adequate health and care, are present (IFPRI, 2009).

While diseases such as whooping cough, measles, and tuberculosis can be prevented and controlled through immunizations, other problems like diarrhea and malnutrition require public health policies and often large-scale interventions to improve nutritional status of children (Bomela, 2007). Improving child health and nutrition is not only a moral imperative, but also a rational long-term investment. Adequate nutrient intake is a requisite for good health which is determined by factors like; ability to resist disease, physical and mental health, normal growth, ability to withstand stress and the attainment of developmental milestone within the expected (Mustapha, 2013).

DESCRIPTION OF NUTRITIONAL STATUS SITUATION IN NIGERIA AND OTHER DEVELOPING COUNTRIES

Nutrition status is most often assessed through nutritional anthropometry in children under five years of age (Tetanye, 2010). The three anthropometric indicators of growth are: stunting, wasting and underweight each of which may be mild, moderate or severe. Biochemical status and the prevalence of overt deficiencies of specific nutrients are also sometimes examined (Atkinson, 2009).

"In today's world of unprecedented technical and economic opportunities, we find it entirely unacceptable that more than 100 million children under five are underweight, and therefore unable to realize their full human and socio-economic potential, and that childhood malnutrition is a cause of death for more than 2.5 million children every year," say José Graziano da Silva, Kanayo, Nwanze and Ertharin, respectively the Heads of FAO, IFAD and WFP, in a foreword to the report (FAO, 2012). About 200 million children under the age of five, that is, about 40 percent of all children in the developing countries lack sufficient nutrition to lead full and active lives (FGN/UNICEF in Lawal and Jibowu, 2006). FOS and IRD/MACRO International (1992) reported that 9 percent of preschool children were wasted with a higher prevalence rate in rural areas. According to the current estimate, one out of every four preschool children is underweight (Olayiwola *et al*., 2006)

Nutrition status was reported to be worse in poor areas of cities than in rural areas in Indonesia, Thailand, India, Costa Rica, Guatemala, and El Salvador, and Tonga (Atkinson, 2009). On the other hand, nutrition status was better in poor urban populations in Peru, El Salvador, Nicaragua, Brazil,

Gambia (Atkinson, 2009) and in Nigeria (Nnanyelugo, 1980). Biochemical and dietary measures of riboflavin intakes in Recife, Brazil, showed children under five years old living in urban slums to have better status than children of cane cutters in the surrounding countryside, and this was related to the amount of milk drunk (Martins and Teixeira, 1976). Low thiamin status was present in both rural and urban Nigerian samples of all ages, with the prevalence higher in the former. However, the prevalence of low riboflavin levels was greater in the urban sample. Both groups had good niacin intake (Fashakin and Oyckanmi, 1986).

The nutritional status of the average Nigerian remained precarious as the country consistently recorded deficit average per capita calorie intake (Olayiwola *et al.*, 2006). Food deficits of 31 percent and 20 percent in 1980 and 2000, respectively were recorded (Okojie *et al.*, *in* Olayiwola *et al.*, 2006). It has been estimated that approximately one out of every three Under-5 children in Nigeria is chronically malnourished and thereby subjected to a pattern of ill health and poor development in early life with malnutrition being associated with more than half of all deaths of children worldwide (Sobo and Oguntona, 2006). Also, Abidoye and Ihebuzor, (2001) in a nutritional survey conducted in Nigeria, revealed high prevalence of malnutrition amongst the same group in Nigeria. Over 40 percent of children under-five are suffering from stunting across northern Nigeria (FGN NBS/UNICEF, 2012). In a joint survey carried out by FGN, NBS, UNICEF (2012), it was revealed that the highest and lowest prevalence of GAM were found in Yobe and Zamfara states at 15.4 % (11.6 - 18.195% CI) and 6.4 % (4.8 -8.4 95% CI), respectively. The prevalence of severe acute malnutrition ranged from 0.6% in Katsina to 3.1% in Yobe states. Given the large number (over 44million) of population in surveyed areas, the result shows that considerable number of children is acutely malnourished and needs nutritional support. Wasting and underweight reached peak during the first two years of life in northern Nigeria, while stunting reached its peak around 25th months of life (FAO, 2012). UNICEF, (2005), showed that in 1990, 43 percent of Nigerian children in the same category were stunted, an indication of the prevalence of malnutrition and chronic household food security: while 36 percent were underweight and 9 percent wasted. There is a high level of malnutrition among children in rural Nigeria: the figures differ with geopolitical zones, with 56 percent reported in a rural area of South West and 84.3 percent in three rural communities in the northern part of Nigeria. Nationally, the overall prevalence of stunting, wasting, and underweight are 42.0 percent, 9

percent and 25 percent, respectively (IFRI, 2009).

The finding of Amosu *et al.* (2011) shows that nutritional status of under-five children in Ipokia Local Government Area of Ogun State, Nigeria was quite poor. Using weight-for-age, 82.13% of the Under-5 children were underweight, 33.52% were stunted while 85.15% were wasted. The intakes of protein, iron, calcium and vitamin A were inadequate in both males and females. Also from the results, it is evident that malnutrition is still a major public health problem among young children due to the poor socioeconomic status (poverty and poor educational background) of their parents, and thus, there is a need for a better nutrition of the Nigerian child.

The study of Lawal and Samuel (2000) on Determinants of Nutritional Status of Children in Farming Households in Oyo State, Nigeria reveals that the most frequently consumed food items in the households (consumed at least 4 times a week) included bread (99.5%), cassava/cassava products, rice (98.8%), yam/yam products (89.6%) and meat (70%). Fruits were, however, not frequently consumed. Household food security data showed that 77.2% were moderately food secure while 9.9% were food insecure. Only 12.8% were food secure. The results indicate that the nutritional status of children in the farming households in the study area was generally suboptimal. Overall stunting prevalence was 35.7%, underweight 14.9% and wasting 5.5%. According to Salami (2006), factors which were significantly associated with nutritional status of the children included age of child, frequency of breastfeeding, eating pattern of child, provision of snacks, household food security status, number of hours mother spends on childcare, mother's use of health services, mother's education, frequency and scope of travel of mother beyond the immediate locality and source of drinking water.

Lawal and Jibowu (2006) in a study on impact of household food security and nutritional programme on the nutritional status of children in Oyo State, Nigeria revealed that 3 in every 10 children were stunted in the study population for the participants' communities while 6 in every 10 children were stunted in the non-participants' communities. In relation to weight for height 5.5 percent of the participants children and 7.5 percent of the non-participants' children suffer from wasting. Both children of participants and non-participants were also underweight though participants' children were nutritionally better in terms of prevalence of under-nutrition and stunting while the difference could be entrenched in the effect of the programme.

FACTORS AFFECTING THE NUTRITIONAL STATUS OF RURAL CHILDREN

According to FAO/WHO in Osho (2006), the most important direct factors include poor feeding practices and or shortfalls in food intake, as well as illness. Conditions such as diarrhea can result in a sharp reduction in the absorption of essential nutrients, while malnutrition reduces resistance to diseases, potentially creating a vicious cycle that can be extremely dangerous to children. A poor food intake, aggravated by loss of nutrients from vomiting, diarrhea, mal-absorption and fever over an extended period, lead to nutritional deficiencies with serious consequences for the growth and immune system of infants and children, leading to increased morbidity and mortality. Furthermore, data, available on the regional prevalence of diarrhea, under-nutrition show a strong interaction among all three, with each of them far more prevalent in the North than in the South of Nigeria. The factors most directly influencing nutritional status of children are extensively discussed as follows:

Monotonous Diet: Children in poor countries are generally submitted to a monotonous diet of staple foods intensifying micronutrient deficiencies (Rogers and Youssef, 1988). Diets are monotonous and consist of very few items.

Socio-economic Characteristics of Parents: In a study of relationship of family characteristics to the nutritional status of pre-school children, Aguillon (1978) stated that income, educational attainment of parents and family size are significantly associated with the nutritional status of the pre-school child and that attention to them in multisectoral development planning can significantly influence nutritional status.

Inadequate Knowledge on Proper Nutrition and Inappropriate Weaning: In a study of three population classes in rural India, Levinson and Morinda (1974) reported that the most significant variables for malnutrition in young children are caloric intake and diarrhea infection. Caloric intake is, in turn, determined by the mother's knowledge of proper nutrition and by income, the latter becoming increasingly more significant as the child grows older. Several investigators have reported that introduction of supplementary food before the age of four months does not have any significant benefit. UNICEF (2005) observed that weight gain was unusually low in infants who did not receive any food supplements until after six months. Available evidence therefore suggests that four to six months is perhaps the most appropriate time to introduce supplementary foods, even when the mother's milk supply is ample.

Unequal Allocation of Household Resources: In a study on child

nutrition and household patterns in South Africa. Bomela (2007) identified that household strategies and decision-making on the allocation of resources are more important variables in identifying the risk factors associated with child malnutrition. These differences in children's nutritional status could be a reflection of the unequal access to household resources. Indeed, some studies have shown that children who do not live with their parents are at a much higher risk of being malnourished than those who live with them (Bruce *et al.*, 1995).

Poverty: It is well recognized that poverty is the principal cause of malnutrition. Acute and chronic under-nutrition and most micronutrient deficiencies primarily affect the poor and deprived people who do not have access to adequate food, live in unsanitary environments without access to sufficient and clean water and basic services and lack access to appropriate education and information. (FAO/WHO, 2013). Essentially control over resources and income is based on military, political, and economic power that typically ends up in the hands of a minority, who live well, while those at the bottom barely survive, if they do (Hunger Notes, Undated)

Rapid Population Growth and Environmental Degradation: Population growth directly increases consumption needs and forces many farm families into marginal areas where conservation practices are essential. Estimate by FAO (2013) admits that half of African farmers live in environments with a highly vulnerable natural resource base. Such areas include cleared forest soils of fragile structure, steeply sloping lands and dryland areas with limited rainfall. In addition, the increased demand for fuel wood for cooking may leave marginal lands permanently denuded of soil cover and subject to erosion. Such loss of productivity in the resource base inevitably reduces food supplies and increases food insecurity and nutritional stress, particularly among vulnerable groups.

Household Health: The problems of contaminated water, insanitary disposal of human excrete and household wastes, poor food and personal hygiene in homes and places of food processing and marketing have a far reaching effect on a child's nutritional status.

WAY FORWARD ON RURAL CHILD NUTRITIONAL STATUS

Ensuring Household Food Security: The International Conference on Nutrition (ICN), held in Rome in 1992, defined food security as "access by all people at all times to the food needed for a healthy life" (FAO/WHO, 1992). Adequate food availability at the national, regional and household

levels, obtained through markets and other channels, is the cornerstone of nutritional well-being. At the household level, food security implies physical and economic access to foods that are adequate in terms of quantity, nutritional quality, safety and cultural acceptability to meet each person's needs. Household food security depends on an adequate income and assets, including land and other productive resources owned. Securing adequate food should be of a primary concern in any society. However, while the need for a sufficient food supply is recognized by everybody, this is often not matched by an understanding that mere availability of food somewhere is not the same as everybody having access to a fair share of it, or that they will eat an adequate diet, or enjoy satisfactory nutritional levels in the biological sense. Indeed, the organization of the first International Conference on Nutrition of the United Nations, held in Rome in December 1992, was undertaken in the spirit of overcoming simplified assumptions regarding nutrition, and to promote processes that will guarantee that everybody can enjoy nutritional well-being. Increased and diversified production of food for family consumption or as a source of income is a basic prerequisite for improved household food security. Better home and community food processing, preservation and storage and access to marketing facilities can also contribute to household food security by alleviating seasonal shortages in food supply and stabilizing market prices. In Nigeria, the UNICEF/FGN is a direct intervention in form of agricultural and rural development programme established to address the problem of malnutrition. The programme promotes nutritional well-being of household members especially that of women and children.

Development of Improved Agricultural Technologies: Agriculture is of fundamental importance to human nutrition, both as a direct determinant of household food consumption and through its role in livelihoods and food systems. There is a growing understanding that agricultural development provides an obvious and needed entry point for efforts to improve nutrition. At the same time, agricultural investments targeted to smallholder farmers are more likely to succeed if they address the human capital constraints due to malnutrition (FAO, 2013). To enhance improved nutrition at household level, development of improved technologies in the area of farming, livestock production, time and labour saving devices, improved feeding practices and child care should be promoted among households in Nigeria especially through nutritional education (Lawal and Jibowo, 2006). Agricultural practices and technology as well as the establishment of small-scale agro-processing industries can significantly increase employment and income-generating opportunities and

thus positively affect household access to food. Food safety and quality, secured through effective food quality control at all stages of production, processing and handling, also influence nutritional well-being. With regard to infant nutrition, the extent of breastfeeding is important, and hygienic preparation and handling of food are crucial for disease prevention and proper child growth.

Nutrition Education and Surveillance: Government policy can directly or indirectly support public nutrition education programmes. Nutrition education could also include popularization of low cost nutritious food and include teaching women about the links between nutrition and disease. Basic health and nutrition knowledge with special focus on wholesome infant feeding practices, should be imparted to the people extensively and effectively. Nutrition and health education concepts shall be effectively integrated into the school curricula. Misleading food advertising can be regulated, and some countries limit the amount of food advertising directed at children or for products such as breast milk substitutes. Constant surveillance from agricultural and health workers could reduce malnutrition (Lawal and Jibowo, 2006). In addition, prevention of food adulteration must be strengthened by setting up a surveillance agency to gear up the enforcement machinery. Increased consumption of fast foods especially among the young population is linked to increased marketing activity. There is a considerable potential for the use of mass media in the nutrition education of the public, but purchasing media time and space can be prohibitively expensive. Where governments are the owners of media, allocating free time for public education can provide valuable support for programmes. Similarly the granting of licenses to private companies could require the allocation of a percentage of free public service time.

Social Protection for the Vulnerable: Growth is clearly important, but it is not always sufficient, or rapid enough. Hence, social protection systems are needed to ensure that the most vulnerable are not left behind and can also participate in, contribute to and benefit from growth interventions (FAO, 2012). Measures such as cash transfers, food vouchers or health insurance are needed for the most vulnerable who often cannot take immediate advantage of growth opportunities. Social protection can improve nutrition for young children - an investment that will pay off in the future with better educated, stronger and healthier adults. With effective social protection complementing inclusive economic growth, hunger and malnutrition can be eliminated.

Homestead Food Production/Home Gardens and Consumption of

Traditional Foods by Families: Mutambara *et al.* (2012) concluded in a study on Impacts of Nutritional Gardens on Health of Communal Households that nutritional gardens significantly reduce the number of times children under the age of five are below normal weight. There should be policies for improved food supplies and nutrition, adapted to local conditions in each country, to support and encourage home gardens, traditional food production and consumption patterns that support nutritional well-being. Evidence indicates that even small-scale homestead production of micronutrient-rich foods, when combined with nutrition education, can have impact greater than its income effects. Homestead production systems offer the potential to improve nutrition for peri-urban and agricultural laborer households, as well as small farmers (Meinzen-Dick*et al.*, 2010). Involvement of families in agriculture will help them to know where their food comes from and then explore food options and incorporate more fresh foods into their diets.

Improved Economy: FAO (2013) affirms that it is only through joint efforts, nationally and internationally, can the realization of the right to adequate food and nutrition for all be achieved. It was further stated that the right to adequate food and nutrition, just like other economic, social and cultural rights cannot be achieved overnight in a resource-poor society. A true human face cannot be provided to any developmental intervention with proper cognizance to the place of nutrition.

Improved Research: The capacity of relevant research and development institutions and universities should be strengthened so that they can generate and package information regarding food and nutrition in the country as well as both on the consumption side as well as the supply side for the purpose of improving the nutritional status of the people. Much-needed information includes the nutrient composition of foods and nutritional requirements of people living in disease-prone areas (Kinabo, 2006).

Land Reforms: Implementing land reform measures so that the vulnerability of the landless and the landed poor could be reduced. This will include both tenure reforms as well as implementation *of* ceiling laws. By this the rural populace will be encourage to go into farming without fear of farm land being disrupted.

Special Nutrition Programme: This could be organized and targeted at school children whereby students will be fed on special meals having the required calories, protein and special nutrients required per day. Ogunba *et al.* (2007) confirms that 87.1 percent of the children in a study on school feeding programme preferred the school foods to their lunch pack form

home and that the programme equally increased enrollment in school.

CONCLUSION AND RECOMMENDATION

The study revealed that one out of every three Under-5 children in Nigeria is chronically malnourished and thereby subjected to a pattern of ill health and poor development in early life with malnutrition being associated with more than half of all deaths of children worldwide. Poverty prevalence, monotonous diets and inadequate knowledge on proper nutrition and inappropriate weaning among others were identified as factors affecting the nutritional status of rural children.

The way forward to improving the rural children nutritional status include; income-generating opportunities to improve household socio-economic status, homestead food production, household food security, improved agricultural technologies, nutritional education and surveillance. It is recognized that the right to adequate food and nutrition, just like other economic, social and cultural rights, cannot be implemented overnight in a resource-poor society.

In view of the above, the following recommendations were made

- Extension agents should be closer to rural families and teach them on good family living and nutrition in order to enlighten them on balanced diets from locally available food items.
- Introduction of bio-fortified varieties of crops to farmers especially cassava which is a popular staple food in Nigeria rural families so that nutritious foods are available right from the farmers' farm.
- Government and relevant stakeholders should step up their implementation of essential nutrient fortification of food items by producers and sanctions to be meted out to erring producers.
- There should be multi-sectoral or holistic approach to rural development so that the entire rural economy will be developed as nutrition alone cannot be isolated from the entire rural development process.

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ANALYSIS OF TRADE AND ENTREPRENEURIAL DEVELOPMENT INITIATIVES FOR YOUTH EMPOWERMENT: THE CASE OF THE NEW CURRICULUM IN THE NIGERIAN SECONDARY SCHOOL SYSTEM

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The study aims at evaluating the trade and entrepreneurial development initiatives of the new Nigerian secondary education curricula introduced by the National Educational Research Development Council (NERDC). A total of 220 youth were randomly selected from Akure South Local Government Area while a questionnaire was used in data collection. The data was subjected to descriptive and inferential statistics. The result shows that there are six major trade subjects prominently offered out of the 34 trade subjects introduced. These are catering and craft, Animal husbandry, Garment making and food & nutrition, photography and dyeing & bleaching. The factors that influence the choice of trade subjects offered included: entrepreneurial intention, the possibility of being self-employed, lucrativeness of trade subjects and the ability to fetch money for survival during and after schooling. Others are students having a role model in the entrepreneur, availability of advancement and because the parents chose the trade subjects. Although, there were teachers handling the entrepreneurial subjects, they were not given any special training and incentives. Other challenges of the entrepreneurial initiatives included inadequate equipment, inadequate funding, lack of group work, poor interaction among the stakeholders and low use of different motivational techniques. The study discovered that the introduction of trade subjects have been able to create entrepreneurial awareness on self-employment among youths but have not been able to stimulate the entrepreneurial mindsets in the students. It has not built the personal confidence and resilience of youths in trade subjects. The study recommends the provision of adequate infrastructures and funds to schools for effective teaching of all the entrepreneurial subjects. The in-service training programme should be organized for teachers. The use of active self-learning and action-oriented

pedagogies, group work and learning through projects should also be encouraged.

Keywords: *Curriculum, empowerment, entrepreneurial education, teaching methodologies, youth*

INTRODUCTION

There is a continuous discuss on who is a youth. According to ILO (2012), countries vary considerably in their definition of youth and childhood. For instance, The United Nations considers individuals under the age group of 15 and 24 as youth. In Uganda, people within the age range of 12 and 30 years are referred to as a youth, however in Nigeria; youthful age ranges from 18 to 35 years (ILO, 2012). Even though there is no consensus about the definition of youth, UNEPA (2014) report stated that half of the world's population of 6.3 billion people is under the age of 25 years. According to the World Youth Facts sheet (2013), there are about 297 million young people in Africa. With the population becoming more youthful than aged, it is projected that young people will constitute about 561 million of the total African population by 2050 (World Youth Datasheet, 2013). The Nigeria population estimate, according to World

Bank (2014) is 178 million, a third of which are young people.

Youths are young, dynamic, energetic and proactive people. They are important actors in redefining and restructuring existing models of kinship and moral patterns of reciprocity and solidarity in the society; hence they are usually referred to as the leaders of tomorrow. Youth are viewed simultaneously as creative and destructive forces (African Sustainability Center, 2014). They have the capacity to fracture public spaces and reinvent or even bypass it. Youth is germane to the development of any nation.

Despite the importance of youth to national development, they are faced with several challenges. Of great importance among the challenges are inadequate skills and training and unemployment. Although, unemployment is a global trend, it occurs mostly in developing countries of the world, with attendant social, economic, political, and psychological consequences (Okafor, 2011). Unemployment describes the condition of people without jobs. The International Labor Organization (ILO, 2012) defines the unemployed as numbers of the economically active population who are without work but available for and seeking work. It includes people who have lost their jobs and those who have voluntarily left work. The problem of chronic

youth unemployment is very evident in Nigeria (Udin and Udin, 2013). According to the National Bureau of Statistics (NBS, 2011) unemployment rate among youth in Nigeria increases annually. Its average was 5.30 percent in 2006 in Nigeria. It increased to 21.10 percent in 2010 and 23.90 percent in 2011 (NBS, 2012).

The Universities and other tertiary institutions in Nigeria produce an average of 120,000 graduates and 500,000 secondary school leavers every year to the labour market where there is no job (ILO, 2009; Akinyemi *et al*., 2012). The scenario occasioned most youth hawking the streets of Nigeria (Okafor, 2011). One of the reasons adduced for the high rate of unemployment among youth in Nigeria is deficient school curricula. Severally, the curricula of Nigeria schools have been criticized because it has been producing job seekers rather than fostering self-employment. The curricula were not tailored towards self-sufficiency in any entrepreneur.

Entrepreneurship, according to Sathiabama (2010), is a dynamic process of creating wealth by individuals or groups of individuals. Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects to achieve objectives (European Commision, 2015). This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activities. Enterprise education is defined as the process of equipping students (or graduates) with an enhanced capacity to generate ideas and the skills to make them happen. Entrepreneurship education equips students with the additional knowledge, attributes and capabilities required to apply these abilities in the context of setting up a new venture or business.

Entrepreneurship is a combination of mindsets, knowledge and skills. As mindsets take shape at an early age, entrepreneurship is something that should be fostered already at school (European Commission, 2008) Youth entrepreneurship, according to Fatoki and Chindoga (2011) brings about self-esteem and makes the youths more productive members of their families and communities. They emphasized that youth entrepreneurship brings about growth in an economy through tax payment thus, contributing to government revenue. Entrepreneurship improves the general standard of society as a whole, invariably enhancing political stability and national security. Youth entrepreneurship reduces crime, poverty and income inequality. In essence, youth entrepreneurship could

indirectly induce an environment for national and regional economic growth and development (Mutezo, 2005). According to Pihie (2009), entrepreneurship can be measured in two ways: Actual entrepreneurship (i.e. people that have actually started business) and entrepreneurial intention or latent entrepreneurship (i.e. people that intend to start business). Latent entrepreneurs wish to be self-employed in the future and have the possibility to realize self-employment with adequate policy.

In industrialized nations, secondary schools have vocational and technical education departments that prepare and develop students for the world of work and entrepreneurship. This is contrary to what obtains in Nigeria. Realizing the flaws in the Nigerian educational curricula, the Federal Government emphasized the need for a new revitalized functional curriculum for all school levels. The Nigerian Educational Research and Development Council (NERDC) were mandated to restructure and enrich the primary, junior and senior secondary school curricula. This led to the emergence of the new Secondary School Education (SSE) curriculum. The Implementation of the new SSE curriculum and its training and evaluation component commenced in September 2011, beginning with the first year of the senior secondary (SS1) level (NERDC, 2008). Thirty-four vocational trades/entrepreneurship subjects were introduced into the secondary school curriculum. The subjects include: Auto Body repair and spray painting, Dyeing, and bleaching; Auto Electrical work; Printing craft practice; Auto Mechanical work; Cosmetology; Auto Parts merchandising; Leather goods manufacturing and repair; Air Conditioning Refrigerator; Keyboarding; Welding and fabrication engineering craft practice; Shorthand; Electrical Installation and Maintenance Work; Data processing; Radio, TV & electrical work; Store keeping; Block laying, Brick Laying & Concrete Work; Bookkeeping; Painting and Decoration; GSM maintenance; Plumbing and pipe fitting; Photography; Machine Woodworking; Tourism; Carpentry and Joinery; Mining; Furniture making; Animal Husbandry; Upholstery; Fisheries; Catering and craft practice; Marketing; Garment making and Salesmanship.

According to NERDC (2008), the philosophy of the new senior secondary education curriculum (SSEC) is based on the fact that every senior secondary education graduate should have been well prepared for higher education. They are expected to acquire relevant functional trade/entrepreneurship skills needed for poverty eradication, job creation, and wealth generation. This is expected to strengthen further the foundations for ethical, moral and

civic values acquired at the basic education level. Each student in senior secondary is expected to take up one entrepreneurship subject from SS1 to SS3 and also be assessed on it at the final year examination. It is expected that such an enterprise would keep the student busy and at the same time fetch him/her income while awaiting further admission.

The success of the implementation strategy hinges on several factors. Some of which are availability of qualified teaching staff, school infrastructures, community interest and support, availability of local resources, socio-cultural inclinations, and student attributes in terms of ability, career interest, age, peers/family influences.

Some of the questions the research work will try provide answer to include the following: Of the list of trade/ entrepreneurial subjects, which are the ones embraced by the schools and students? Why the choice of the trade subjects? Do the teachers possess the necessary skills to handle the trade subjects? Are the required infrastructures for the implementations of the trade subjects available? What are the strategies put in place to meet the infrastructural requirements? Can the teachers handle the infrastructures efficiently? Are the students interested in the trade subjects? If yes, which of the trade subjects are they inclined to? What are the factors that influence their trade choices? Are the parents involved in the decision-making process? What are the practical effects of the trade subjects on the students' entrepreneurial development?

Response to these questions will confirm whether the trade and entrepreneurial development initiatives could empower the youth and reduce the rate of unemployment in the Nigerian society or not. It is on this premise that the research work is carried out to appraise trade and entrepreneurial development Initiatives for Youth Empowerment using the new Curriculum in the Nigerian secondary school system as a case study. Specifically, the research aims at:

ascertaining the trade/ entrepreneurial subjects embraced by the schools and the students in Akure South Local Government Area of Ondo state;

investigating the factors influencing the choices of trade subjects;

identifying the infrastructures available in different schools for trade choice implementation;

assessing the teaching methodologies embraced in trade/ entrepreneurial subjects; and

determining the practical effects of the trade subjects on students' entrepreneurship development.

METHODOLOGY

The study was carried out in Ondo state, Nigeria. All the secondary schools in Ondo state constitute the population for the study. However, the sampling size was determined through a multi-stage sampling procedure. There are three senatorial districts in Ondo state- Ondo south, Ondo central and Ondo North. Ondo central senatorial district was purposively selected for the study, which is made up of six Local Government Areas. These are Akure North, Akure South, Idanre, Ifedore, Ondo East and Ondo West. Two out of the six LGAs were randomly chosen. These are Akure South and Ifedore LGAs. There are 27 public secondary schools in Akure South LGA and ten public secondary schools in Ifedore LGA. Nine public secondary schools were randomly selected from Akure South LGA while three public Secondary schools were randomly selected from Ifedore LGA. A proportionate sampling technique was used to select the students from each school according to the population of SS3 students.

Thus a total of 220 students were randomly selected and utilized for the study. A structured questionnaire was used to collect data. On-site assessment of the infrastructures available for the implementation of trade subjects was carried out. The data collected were analyzed using descriptive statistics such as frequency counts and percentages and inferential statistics such as Likert-type scale and chi square.

RESULTS AND DISCUSSION

Personal characteristics of the respondents

Data in figure 1 shows that the age of the respondents ranges from 13-22 years, with a mean age of 16.7 years. The mean age shows that all the respondents are still within the youthful age. Young age is synonymous to risk taken and innovativeness, hence the students are expected to be willing to develop special interest in one trade/entrepreneurial subjects or the other and take up such subjects as intent entrepreneurs. About 52% of the respondents were female while 48.64% were male (Figure 2). The study affirms equal educational opportunities to the male and female gender in south western Nigeria. This is contrary to the findings of UNICEF (2005) where over 40 percent of the youth in the northern Nigeria do not attend schools, particularly the girl-child.

Location of the schools

Data in figure 3 shows that 75% of the schools visited were located in urban area while 25% were located in the rural area (figure 3). The schools in

urban areas are expected to offer more entrepreneurial subjects than the schools in the rural areas. The urban schools are expected to have more qualified teachers handling trade subjects than their rural counterparts and are expected to take good advantage of their location in exploring different trades, companies around them for effective teaching of trade subjects.

Distribution of the trade/ entrepreneurial subjects embraced by the schools and the students in Akure south Local Government Area of Ondo state

Out of the 34 trade subjects introduced into the secondary school curriculum, 18 (52.94%) were offered in Akure South Local Governments. Also out the 18 trade subjects, the once indicated to be offered among the schools include: catering and craft (88.89%), animal husbandry, garment making and food & nutrition (66.67%), respectively, photography (55.56%), and dyeing and bleaching (44.410%). All others recorded very low percentages (Table 1). In essence, it could be said that six major trade subjects are prominently offered among schools in Akure South Local Government Area. These are catering and craft, animal husbandry, garment making and food & nutrition, photography as well as dyeing and bleaching. A further investigation into the ones offered by the students under survey, Table 2 shows that animal husbandry occupied the first position among the trade subjects by (40.9%) of the respondents. This is expected because of the current emphasis of economic diversification from oil to the other sectors of the economy, in which agriculture as a business was mostly emphasized. At the 2nd position among the trade subjects being offered was catering and craft (20.9%), followed by book keeping (16.67%) and data processing (10.0%). Others include garment making (5.9%), marketing, photography & cosmetology (3.18%), respectively. At the ninth position was dyeing and bleaching. Some of the reasons for choice of trade subjects could be adduced to the presence of the necessary infrastructures required to teach the trade subjects. In essence, despite the introduction of 34 trade subjects in schools, the choices of the students were limited by the availability of infrastructure and personnel.

Factors influencing the choices of trade/entrepreneurial subjects

While investigating the factors influencing the choice of trade subjects, the Chi square analysis in Table 3 revealed that 10 out of the 20 variables subjected to Chi square analysis were found to significantly influence the choice of trade subjects offered by the students. These are entrepreneurial intention (x=0.080), possibly of being self-employed

(x=0.024). trade subject being lucrative (x=0.010). ability of trade subjects to fetch money for survival during and after schooling (x=0.00). having a role model in the entrepreneur (x= 0.019), availability of advancement opportunities in trade subjects (x= 0.019). because the trade subjects were chosen by some parents (x=0.000). students were advised by school counselor (x=0.019). because the trade subjects of interest was not offered in one's school (x=0.014).

The positive significance of entrepreneurial intention to the choice of trade subject is expected. This is because one of the major reasons for introductory trade subjects, according to Orji (2013). is to stimulate entrepreneurial intention in the students. This is expected to propel the students to commence work on the trade subjects after schooling rather than waiting for a white collar job. Entrepreneurial intention is expected to reduce youth unemployment in Nigeria. Also the positive significance of the possibility of being self-employed by the trade is also expected to negate the unemployment problem in Nigeria. A lucrative trade subject would ordinarily attract the youths to a particular trade or the other- this also goes the same line with the ability to make money from the trade subject. This is in line with the *a priori* expectation that if the students have been exposed to a trade subject before leaving secondary school, they will be able to generate enough funds for their sustenance when on holiday and even after schooling (Orji, 2013). This conforms to the international standard where students can work and school at the same time. The influence of a role model in the choice trade subject is also very germane. This will keep the students focused and always ready to attain a particular standard or even greater standard in future in the field of endeavour. Availability of advancement opportunities will propel the students to participate effectively so as to be able to pursue the trade subject as a career. This is also meeting one of the goals of introducing the trade subjects into the school curricular. Parental influence was also found to be significant in influencing the choice of trade subjects by the students.

This is in line with Adebo and Sekunmade (2013) findings that parents play significant roles in choosing career for their wards. Same thing goes for the advice of the school counselor. Lastly, some of the students were influenced by the affection they have for teachers taking the trade subject. According to Adebo and Adesoji (2010) teachers' characteristics greatly influence students' decision in the choice of a subject. A good and democratic teacher would ensure students participation in his class. Such teacher would combine characteristics such as confidence, patience, understanding,

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empathy, true compassion for students, willingness to help students achieve their goals and academic competent in driving his/her message home. Also, Adebo and Adesoji (2010) emphasized the role of a classroom teacher and the ability to influence students' interest among the quality expected from a good teacher. However, it is noted that some of the students are doing the trade subjects in the absence of a trade subject of their choice. There is the need to provide infrastructures in all the schools to increase the choice and number of trade subjects that could be offered by the students. Apart from this, more personnel's should also be recruited and trained to handle all trade subjects.

The infrastructures available in different schools for trade choice implementation

Data in Table 4 shows the infrastructures available for the teaching of the trade subjects. Over half of the schools/ students indicated the availability of infrastructures for the teaching of trade subjects while the rest (49.1%) did not have adequate equipment to teach the trade subjects. In terms of finance, 83.6 percent of the respondents indicated that the government did not provide fund for the purchase of tools needed to handle the trade subjects and execute the proper teaching of the trade subjects, respectively. The statement was confirmed through personal interview with some of the teachers handling the trade subjects. Although the data revealed the availability of teachers to handle the trade subjects as indicated by 91.4 percent of the respondents, personal interaction with some of the teachers indicated that they did not receive any special training (In-service training) since the introduction of trade subjects to the schools . Data in Table 4 also shows the availability of textbooks and the appropriateness of such books as indicated by 75.5 & 77.3 percent of the respondents respectively. Also, a few (19.1%) new teachers and members of trade organizations were employed to handle the trade subjects. It indicates that most of the trade subjects were handled by the same set of teachers teaching in the schools before the introduction of the trade subjects. Less than half (48.6%) of the respondents indicated the availability of laboratories for the teaching of trade subjects.

From the foregoing, it could be affirmed that there were adequate equipment for the teaching of the trade subjects in most schools in Akure South Local Government areas, however, the government did not provide adequate funding to purchase the tools required for effective teaching of the subjects. Although, there were teachers on ground to handle the subjects, they were not given any special training on so many of the trade subjects, neither do the government employ new set of

teachers to handle them. The members of trade associations were not employed either in the handling of the trade subjects. Most of the schools do not possess good laboratories for effective handling of trade subjects.

The teaching methodologies embraced in trade/ entrepreneurial subjects

Data in Table 5 shows the assessment of the teaching of the trade subjects. This was subjected to a 5 point Likert-type scale of strongly agree, agree, and undecided, disagree and strongly disagree. Based on the mean of three, data in Table 5 revealed that the following variables were significant: the teaching of the trade subjects was interactive (x=3.27), there were more practical works done in trade subjects than other subjects (x=3.67). Others include, students were given more assignments to do in trade subjects than other subjects (x=3.35), and that students were rewarded for good performance in practical works in trade subjects (x=3.69).

The significance of the teaching of trade subjects as being interactive is expected due to the nature of some of the subjects and the necessity to interact while teaching in order to drive the messages home. Focus group discussion with some students also revealed that some of the schools especially FUTA secondary school students were taken to the university teaching and research farms where they were being taught by experts in animal husbandry. This confirms the *a priori* expectation of the researchers that urban schools should be able to utilize their location to the advantage of teaching of trade subjects. This also follows the given of assignments and take home projects, all these are expected to boost the ability of the students to practice on their own after the classroom work.

However, other variables were not significant. It shows that, the methods of teaching trade subjects were different from that employed in other subjects in the classroom. It also shows that the students were not arranged to work in groups. i.e. group work was not encouraged; that the students did not visit companies and shops of successful entrepreneurs for sight-seeing and encouragements and that there was no interaction among the teachers teaching the trade subjects, neither were best teachers rewarded for the good performance of their students in trade subjects.

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The practical effects of the trade subjects on students' entrepreneurship development

The practical effects of trade subjects on students entrepreneurial development was revealed in Table 6. Based on the mean of three (3), variables found to be significant are as follows: the teaching of trade subjects stimulated the thinking faculty of the students (x=3.35); it developed the ability of the students to solve problems related to the trade subjects offered (x=3.62); and it provided innovative ideas on how to start one's own business (x=3.36). Others include it raised the awareness of students on self-employment (x=3.52) and enabled the students to see entrepreneur as possible career options (x=3.38).

However, other variables were not significant (Table 6). It shows that the teaching of Trade subjects have not stimulated the mindset of the youths on entrepreneurs. The trade subjects have not provided specific business knowledge and skills on how to start a

company and run it successfully. The students have not been able to analyze business ideas on my trade subject objectively, and It has not developed their ability to communicate and network as well as evaluate projects.

To a certain extent, it could be said that the introduction of trade subjects have been able to create entrepreneurial awareness on self-employment in the youths but have not been able to stimulate the entrepreneurial mindsets as well as build their personal confidence and resilience of youths in trade subjects

CONCLUSIONS AND RECOMMENDATIONS

The introduction of trade subjects have been able to create entrepreneurial awareness on self-employment in the youths but have not been able to stimulate the entrepreneurial mindsets as well as build their personal confidence and resilience of youths in trade subjects.

Based on the findings, the study recommends the following:
The government should encourage the offering of more trade/ entrepreneurial subjects in the secondary schools to meet the student's choice and enhance the achievement of developing a true entrepreneurial spirit among the youth. There is the need to provide adequate infrastructures and funds to schools for effective teaching of all the trade subjects. In-service training programmes in terms of theory and of innovative instruction should be organized for teachers at the beginning of each session and where necessary, new teachers should be recruited to handle some of the trade subjects. New teaching tools/methods tailored to the specific field of study should be developed. Student centered teaching methodology should be employed; more of self-learning/ discovery should be encouraged. The teaching should balance theoretical and practical aspects, making use of inter-active and pragmatic methods; active self-learning; action oriented pedagogies; group work; learning through projects; learning by direct experience; methods for self-development and self-assessment School laboratories should be equipped for effective teaching of trade subjects. Students should be exposed to role models in their trade subjects. Examples of successful business men/women in the various trades/ entrepreneur should be cited where necessary to boost students' interest. Excursions/visit to such business shops/companies could be arranged and executed. The government at all levels should support programmes for training entrepreneurship teachers within a Nigerian business environmental dimension. Exchange programmes for trade teachers could be organized. Teachers handling trade subjects should be encouraged to interact for cross fertilization of ideas. This can be

achieved through workshops, seminars and conferences attendance. Teachers who students perform excellently well in trade subjects should be given public recognition and rewarded through promotion or financial incentives. If all the above suggestions are adhered to, it would stimulate the entrepreneurial mindsets as well as build the personal confidence and resilience of youths in trade subjects.

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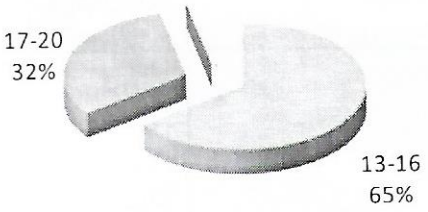
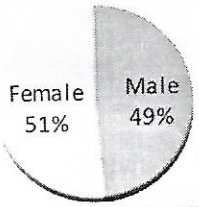
Figure 1: Age of the respondents



Figue 2: Sex of the respondents



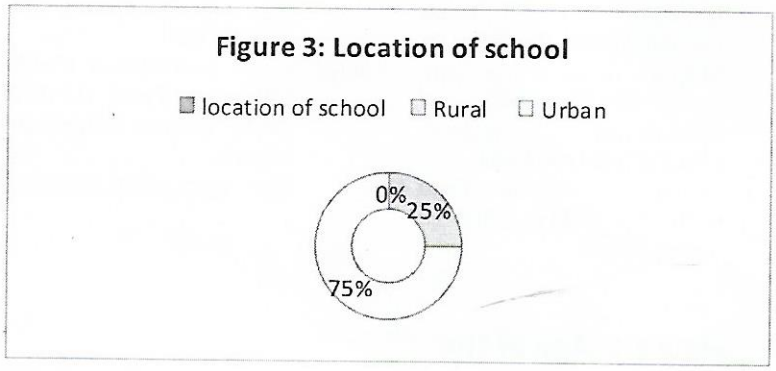


Table 1: Trade subjects offered in the schools

Variable	Frequency (9 schools)	Percentage
Trade subjects	01	11.1
Visual Arts	01	11.1
Computer Installation	01	11.1
Carpentry and joining	01	11.1
Book keeping	02	22.2
Cosmetology	02	22.2
Fishery	02	22.2
Dyeing and bleaching	04	44.4
Painting and decoration	01	11.1
Data processing	02	22.2
Applied electrical installation	02	22.2
Catering and craft	08	88.89
Garment making	06	66.67
Food and Nutrition	06	66.67
Animal husbandry	07	77.78
Photography	05	55.56
Office practice	02	22.2
Marketing	01	11.1

Table 2: Trade subjects offered by students

Variable	Frequency (220)	Percentage
Animal husbandry	90	40.9
Book keeping	15	16.67
Catering and craft	46	20.91
Cosmetology	07	3.18
Carpentry and joining	04	1.8
Data processing	22	10.0
Dyeing and bleaching	05	2.27
Food and Nutrition	01	0.45
Fishery	02	0.90
Painting and decoration	04	1.18
Applied electrical installation	0	0.00
Garment making	13	5.9
Photography	07	3.18
Office practice	0	0.00
Marketing	07	3.18
Computer Installation	0	0.00

Table 3: Chi square result on analysis on factors influencing choice of trade/entrepreneurial subject

S/N	Factors	Chi-square value	Df	Asymp. Sig. (2-sided)	Remarks
1	Genuine interest in the trade subject	45.877	48	0.560	Not Sig.

2	I believe strongly that I can learn the trade subject and excel in it (self-efficacy)	31.789	48	0.966	Not Sig.
3	I intend to pursue the trade after my education (Entrepreneuria l intention)	74.986	48	0.08	Sig.
4	Availability of infrastructure in the community	45.432	48	0.579	Not Sig.
5	Available of infrastructure in the school	39.442	48	0.806	Not Sig.
6	Possibility of being self employed by the trade	69.233	48	0.024	Sig.
7	Trade subject is lucrative	73.772	48	0.010	Sig.
8	Trade subject can fetch me money for survival during and after schooling	104.477	48	0.00	Sig.
9	I have a role model in the entrepreneur	70.583	48	0.019	Sig.

10	Availability of advancement opportunities in trade subjects	73.564	48	0.010	Sig.
11	Ease of learning trade subjects	42.903	48	0.681	Not Sig.
12	The trade choice gave me the opportunity to apply my skills	50.870	48	0.361	Not Sig.
13	Because my friends offer same trade subjects	48.411	48	0.456	Not Sig.
14	The trade subject is chosen by my parents	79.138	48	0.050	Sig.
15	The trade choice chosen by my school	41.654	48	0.729	Not Sig.
16	I choose the trade choice due to my Guardian`s advice	56.255	48	0.193	Not Sig.
17	The school counselor advised me to do the trade subject	63.067	48	0.071	Sig.

18	I am doing it because I have no choice	53.373	48	0.275	Not Sig.
19	The trade choice I am interested in is not offered in my school	72.149	48	0.014	Sig.
20	Because I like the teacher handling the trade subject	63.772	48	0.063	Sig.

Table 4: Frequency Table for Availability of Infrastructure

Infrastructure	Yes (Frequency)	Percentage
Is there enough equipment to teach the trade subjects?	112	50.9
Does the government provide money to buy the tools needed for the trade courses?	36	16.4
Are there adequate funding to execute proper teaching of trade subjects?	105	47.7
Are there teachers to handle the subjects?	201	91.4
Are textbooks available for the teaching of trade subjects?	166	75.5
Are the textbooks good and appropriate?	170	77.3
Do they employ new	93	42.3

The method of teaching is the same as the ones used in a normal classroom subjects	280	300	150	78	0	808	3.67
	125	60	105	200	50	540	2.45
There are more practical works done	250	300	90	140	0	780	3.55
Students are made to work in groups in trade subjects.	0	40	0	380	20	440	2.0
	50	144	120	200	34	548	2.49
Students are given project works to embark upon in trade subjects	300	352	60	100	0	812	3.69
We visit companies/shops of successful entrepreneurs in my trade subjects	50	144	120	168	50	532	2.42

Teachers teaching different trade subjects interact and share ideas							
Students are rewarded for good performance in practical works in trade subjects?							
Best teachers are rewarded for the good performance of their students in trade subjects?							

Table6: Practical effects of the trade subjects on student's entrepreneurship development

practical effects of the trade subjects on students entrepreneurship development	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Total	Mean

The trade subject stimulate my thinking faculty creatively	250	304	90	60	34	738	3.35
The trade subject I offered have stimulated my mindset on entrepreneur	150	180	90	200	15	635	2.86
The trade subjects provide specific business knowledge of how to start a company and run it successfully.	75	140	144	244	0	603	2.74
The trade subjects provide specific business skills of how to start a company and run it successfully	150	100	135	120	60	565	2.57
I can solve problems relating to the trade subjects I am offering effectively	300	264	135	98	0	797	3.62
I can analyze a business ideas on my trade subject objectively,	75	72	300	174	0	621	2.82
It has developed my ability to communicate and network	90	120	150	80	82	522	2.37
It has developed my ability to evaluate projects	75 250	60 220	180 120	240 150	0 0	555 740	2.52 3.36
The trade subject has given me innovative ideas on how to start my own business	325	200	120	130	0	775	3.52

It has raised my awareness about self-employment	300	200 140	120	80	40		
It enables me to see entrepreneurship as possible career options	150		300	100	05		
It has developed my confidence in embarking on a business venture							

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IMMUNIZATION - AN IMPORTANT PUBLIC HEALTH STRATEGY TO SAFE THE FARM CHILD IN NIGERIA

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The farm child in Nigeria when compared to other children in developed nations, has lower chances of survival at birth till one month (neonatal stage), higher probability of death before the age of one year (infant stage) and even attaining the age of five is often by chance. The situation is generally worrisome in Nigeria with statistics showing that Nigeria accounts for 13% of under-five mortality in the whole world up till year 2014. Nigeria was listed with India, Pakistan, DR of Congo and China as accounting for 50% under- five mortality in the whole world. The other records of infant and neonatal mortality were not better. This is general average situation in Nigeria cutting across both rural and urban areas. If this is the situation in the country, then the farm child who is given birth to most times in traditional birth homes or poorly equipped and under staffed primary health care centers will definitely account for most of these deaths. The farm child who battles death right from the womb (as a result of poor nutrition and medicare for the mother) and eventually survives death at birth is still threatened with unfavorable conditions such as lack of clean water, poor nutrition, poor sanitation etc. The government recognizes this fact and therefore employed several public health strategies among which is immunization that was meant to combat the situation. Immunization has been in use for several years with billions of naira expended with support from donor agencies. It is against this background, that this paper examined the concept of public health, types of vaccine preventable diseases and equivalent vaccines to prevent them, the level of coverage, statistical trends of child health indicators in Nigeria vis-à-vis West Africa and selected countries in the world and finally, suggested ways to improve the present immunization situation in Nigeria.

Keywords: *Farm child, immunization, health and neonatal.*

INTRODUCTION

Immunization is a key intervention in reducing child mortality. Government of several countries are collaborating with agencies like United Nations International Children's Emergency Fund (UNICEF), World Health Organisation (WHO) to ensure the

availability of vaccines to every under-five children in their nations. This is a key strategy to achieve millennium development goal (MDG) which is aimed at reducing child mortality by two-thirds, from 93 children of every 1,000 dying before age five in 1990 to 31 of every 1,000 in 2015. According to UNICEF, about 29,000 children under the age of five (21 each minute) die every day, mainly from preventable causes. More than 70 per cent of almost 11 million child deaths every year are attributable to six causes: diarrhea, malaria, neonatal infection, pneumonia, preterm delivery, or lack of oxygen at birth. In the words of UNICEF (2008):

> *These deaths occur mainly in the developing world. An Ethiopian child is 30 times more likely to die by his or her fifth birthday than a child in Western Europe. Among deaths in children, South-central Asia has the highest number of neonatal deaths, while sub-Saharan Africa has the highest rates. Two-thirds of deaths occur in just 10 countries. And the majorities are preventable. Some of the deaths occur from illnesses like measles, malaria or tetanus. Others result indirectly from marginalization, conflict and HIV AIDS. Malnutrition and the lack of safe water andsanitation contribute to half of all these children's deaths. Global experience suggests that over two thirds of child deaths are entirely preventable (UNICEF, 2008).*

Disease is not inevitable, nor do children with these diseases need to die. Research and experience show that six million of the almost 11 million children who die each year could be saved by low-technology, evidence-based, cost-effective measures such as vaccines, antibiotics, micro-nutrient supplementation, insecticide-treated bed nets and improved family care and breast feeding practices. This prompted UNICEF to respond by partnering with governments, WHO and others. UNICEF aims to scale up proven, high-impact, cost-effective health and nutrition interventions to reduce the number of infant, neonatal and young child deaths from preventable and easily treatable causes. While global immunization rates have risen from less than 20 per cent in the 1970s to about 74 per cent in 2002 and 84% in 2013 millions of children are yet to be reached (Harris *et al.*, 2014). Unfortunately in Nigeria the rural children on the farms are even more disadvantaged in getting access to these vaccines because of the peculiar terrain of the rural areas.

Statement of the Problem

The rural farm households, being the engine room of Nigerian agriculture, must enjoy improved healthy life for the country to move forward. The

relevance of healthy children in the rural household was highlighted by FAO (2009) by stating that "...disease has massive impact on agricultural output as the sick and dying are increasingly unable to work, and relatives take time out to look after their family members."

The position of children in Nigeria agriculture is a very important one. According to Olayide (1980), in Nigeria while male children assist the men, female children assist the women. The number of hours put in by the available children on the farm daily ranges from 2-8hours with a mean of 2.4 hours (Alimi, 1991). It is therefore necessary that these children are healthy in order to contribute optimally to the rural family economy. Unfortunately many of these children are often sick while some even die due to sicknesses that could have been prevented by vaccines. The loss in man- hour which parents used for nursing a sick child is significant and must be considered as economic loss due to child sickness. The roles of the farm child on the family farm in activities like harvesting, shelling, packaging (which are light but very relevant tasks) are affected by a child's health.

In recognition of this fact, successive governments with support from the international community have introduced several programmes like the Expanded Programme on Immunization (EPI) now referred to as National Programme on Immunization (NPI), this programme has the overall goal of improving the health of children. Despite available statistics of improvement in the coverage of immunization in Nigeria, many children are yet to be reached. Therefore it is necessary to review the available records on immunization coverage, incidence of child killer diseases and the mortality rate of children in Nigeria at various ages vis-à-vis available records in selected African countries and other countries of the world.

The Concept of Public Health

Public health is "the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organisations (public and private), communities and individuals" (Winslow and Charles, 1920). According to Dorland's medical Dictionary (2007), it is the field of medicine concerned with safeguarding and improving the health of the community as a whole. It is concerned with threats to health, based on population health analysis. The population in question can be as small as a handful of people or as large as all the inhabitants of several continents (for instance, in the case of a pandemic). The dimensions of health can encompass "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity", as defined by the United

Nations' World Health Organization (WHO, 1946). Public health incorporates the interdisciplinary approaches of epidemiology, biostatistics and health services. Environmental health, community health, behavioural health, health economics, public policy and occupational health are other important subfields. The focus of public health intervention is to improve health and quality of life through the prevention and treatment of disease and other physical and mental health conditions, through surveillance of cases and the promotion of healthy behaviours. Promotion of hand washing and breastfeeding, delivery of vaccinations, distribution of condoms to control the spread of diseases, distribution of mosquito treated nets are examples of common public health measures.

Modern public health practice requires multidisciplinary teams of professionals including physicians; specialising in public health/community medicine/infectious disease, epidemiologists, biostatisticians, public health nurses, medical microbiologists, environmental health officers, dental hygienists, dietitians and nutritionists, health inspectors, veterinarians, public health engineers, public health lawyers, sociologists, community development workers, communications officers, and others (PHAC, 2005).

Many diseases are preventable through simple, non-medical methods. For example, research has shown that the simple act of hand washing with soap can prevent many contagious diseases. In other cases, treating a disease or controlling a pathogen can be vital to preventing its spread to others, such as during an outbreak of infectious disease, or contamination of food or water supplies. Public health plays an important role in disease prevention efforts in both the developing world and in developed countries, through local health systems and non-governmental organizations. The World Health Organization (WHO) is the international agency that coordinates and acts on global public health issues. Most countries have their own government public health agencies, sometimes known as ministries of health, to respond to domestic health issues. For example in the United States, the front lines of public health initiatives are state and local health departments. The United States Public Health Service (PHS), led by the Surgeon General of the United States, and the Centers for Disease Control and Prevention, headquartered in Atlanta, are involved with several international health activities, in addition to their national duties. In Canada, the Public Health Agency of Canada is the national

agency responsible for public health, emergency preparedness, response, infectious and chronic disease control and prevention. The Public health system in India is managed by the Ministry of Health & Family Welfare of the government of India with state owned health care facilities.

The public health department of the Federal Ministry of Health in Abuja coordinates all public health programmes in Nigeria: States ministries of health and local governments department of public health also help with implementation of health programmes at the state and local government levels respectively.

There is a vast discrepancy in access to health care and public health initiatives between developed nations and developing nations. In the developing world, public health infrastructures are still forming. There may not be enough trained health workers or monetary resources to provide even a basic level of medical care and disease prevention (Chen *et al*., 2006). As a result, a large majority of disease and mortality in the developing world results from and contributes to extreme poverty. For example, many African governments spend less than US$10 per person per year on health care, while, in the United States, the Federal Government spent approximately US$4,500 per capita in 2000 (Muljadi, 2010)

Public health also takes various actions to limit the health disparities between different areas of the country and, in some cases, the continent or world. One issue is the access of individuals and communities to health care, in terms of financial, geographical or socio-cultural constraints in access to and use of services. Applications of the public health system include areas of maternal and child health, health services administration, emergency response, prevention and control of infectious and chronic diseases. The great positive impact of public health programmes is widely acknowledged. "Due in part to the policies and actions developed through public health, the 20th century registered a decrease of the mortality rates in infants and children and a continual increase in life expectancy in most parts of the world. It is estimated that the life expectancy has increased for Americans by thirty years since 1900 and worldwide by six years since 1990" (WHO, 2007).

Types of Immunization and its Benefits

According to UNICEF (2008), in 2002, 7 of every 1,000 children in industrialized countries died before they were five. In South Asia, 97 of 1,000 children died before they were five. And in sub-Saharan Africa, that number is 174 of every 1,000 children. Nigeria still have a high under five mortality rate and high maternal mortality rate despite efforts by the

government to improve these indicators through several public health intervention programmes like immunization. There are several vaccine preventable child killer diseases. In Table 1 name of the vaccine preventable diseases, symptoms and name of vaccine is presented.

Present Situation of Immunization in Nigeria

Immunization has been found to be one of the most cost-effective interventions in the world for preventing death and disease. One major step to achieve this is through vaccination. Experts have evaluated many benefits for vaccine. For instance, when a child is vaccinated, it will produce immunity to disease in their body 90 – 100 per cent of the time. It has also been found that vaccines can bring economic benefits as well. According to recent International Vaccine Centre, IVAC (in Johns Hopkins Bloomberg School of Public Health) projections, achieving 90 per cent immunization coverage in the next decade could add $17 billion to the Nigerian economy (The African Child Information Hub, 2012).

The level of immunization coverage in the country has increased over the years. This feat was achieved possibly because of several approaches adopted by Federal, State and Local governments across Nigeria. The most popular approach was the use of health rangers who move with immunization kit; visiting homes, churches, mosques, markets and schools in to vaccinate children under the age of five. It is quite unfortunate that despite the progress made in Nigeria on immunization coverage, it is at a slow pace and still far from the target and what has been achieved in other Nations of the World. It is worrisome that even within Africa, many Countries have achieved coverage far above the level achieved in Nigeria and therefore have a drastic reduction in neonatal, infant and under five mortality. In Nigeria, a lot still need to be done to achieve expected coverage level.

In 2013, a total of 129 of 194 WHO member states achieved ≥90% national DTP3 coverage, and 56 achieved ≥80% DTP3 coverage in every district. DTP3 coverage was 80%–89% in 31 countries, 70%–79% in 16 countries, and < 70% in 18 countries (Harris *et al,2014)*.Among the 21.8 million children who did not receive DTP3 doses during the first year of life, 10.9 million (50%) lived in three countries (India [31%], Nigeria [13%] and Pakistan [6%]): 14.8million) (68%) lived in 10 countries. It is quite unfortunate that Nigeria is listed with the 3 countries where DTP3 inadequate coverage is obvious. The inadequate coverage of immunization for children in Nigeria has reflected in the high number of children who die before their fifth birthday. About half of under-five

deaths occur in only five countries: India, Nigeria, Pakistan, Democratic Republic of the Congo and China. India (21 percent) and Nigeria (13 percent) together account for more than a third of all under-five deaths. These poor records of child mortality in Nigeria at birth (neonatal.), before attaining a month (infant mortality) and before attaining 5 years is shown s in table 2.

In figure 1, Nigeria has the highest under five mortality in the whole of West Africa (852,000 in 2009 and 804,000 in 2013. It is worthy to note that as at 1990 countries like Guinea, Guinea Bissau, Liberia and Niger has infant mortality records that are worse than Nigeria's. Unfortunately for the "Giant of Africa"- Nigeria, by 2013, Nigeria was already behind Guinea, Liberia and Niger in infant mortality records. By 2013 Nigeria has one of the worst infant mortality record of 74 deaths per 1000 live births in West Africa. Whereas in countries like Iceland, Hungary, USA, Canada infant mortality figures were already a single digit number since 1990. In Iceland and Japan the level of infant mortality in 2013 was as low as two beating even UK, USA where four and six children respectively out of every 1000 live birth die before the age of one year. Similarly in 1990, Guinea and Guinea Bissau were the only two countries that were worse than Nigeria in neonatal mortality rates however, by 2013, only Guinea Bissau was behind Nigeria in neonatal records in the West African Sub region.

The question that will come to the mind of any Nigerian is why this poor records by Nigeria? These health indicators are reflections of economic, social, political and institutional problems peculiar to the country. Although, Guinea had economic challenges like Nigeria after the death of President Lansana Conte in 2008 coup. This made international donors including the G8, the IMF and World Bank curtailed their development programmes, but the IMF approved a new 3 year Extended Credit Facility (ECF) arrangement in 2012 following the December 2010 presidential elections. The fairly stable democratic government that was enthroned in 2010 in Guinea put child health care issue in the front burner: this may have accounted to rapid improvement in child health indicators in Guinea. Nigeria had uninterrupted civilian rule since 1999 yet could not move ahead of Guinea but rather was overtaken by Guinea because of the complex and peculiar challenges in Nigeria's politics and institutions.

Nigeria has the highest under 5 child mortality in West Africa. Figure 3 show the global neonatal mortality rate declined 40 percent from 33 deaths per 1,000 live births in 1990 to 20 in 2013. Despite falling rates and levels of neonatal mortality, the proportion of under-five deaths that occur within the first month of life (the neonatal

period) has increased from 37 percent in 1990 to 44 percent in 2013, because declines in the neonatal mortality rate are slower than those in the mortality rate for older children. Around two-thirds of neonatal deaths occur in just 10 countries, with India accounting for more than a quarter and Nigeria for about a tenth. (UNICEF, 2014).

Acceleration in reducing child mortality is urgently required, particularly in sub-Saharan Africa and Southern Asia. As the region with the highest mortality rates, sub-Saharan African countries like Nigeria continue to face considerable challenges. The region's 48 percent reduction in under-five mortality since 1990 has been slower than any other regions except Oceania. Faster progress in reducing child mortality in the rest of the world has led to a higher concentration of under-five deaths in Sub- Saharan Africa. In 2013, 3.1 million deaths—half of under-five deaths globally—occurred there. It is the only region where the number of live births and child population is expected to rise substantially over the next two decades (WHO, 2014). By 2050 close to 40 percent of live births will take place in sub-Saharan Africa, and 37 percent of the world's children under age five will live there. Thus, the number of under-five deaths may stagnate or even increase without further progress in the region (Levels & Trends in Child Mortality Report, 2014).

Ending child deaths from preventable infectious diseases is critical. Despite strong advances in fighting childhood diseases, infectious diseases- (which are most often diseases of the poor and thus are a marker of equity) - remain highly prevalent, particularly in sub-Saharan Africa and Southern Asia. Pneumonia, diarrhoea and malaria remain leading causes of death among children under age five-killing roughly 2 million in 2013 and accounting for almost a third of global under-five deaths (UNICEF, 2014). Pneumonia, diarrhoea and malaria accounted for about 1.3 million-or about 40 percent - of under-five deaths in sub-Saharan Africa and roughly half a million - or about 25 percent - in Southern Asia. The major improvements in child survival since 1990 are partly attributable to affordable, evidence-based interventions against the leading infectious diseases, such as immunization, insecticide-treated mosquito nets, and rehydration treatment for diarrhoea, nutritional supplements and therapeutic food. Accelerating the reduction in under-five mortality is possible by expanding effective preventive and curative interventions that target the main causes of post-neonatal deaths and the most vulnerable newborns and children. Neonatal mortality is declining globally but more slowly than post-neonatal (1-59 months) mortality. The first 28 days of life (the neonatal period) are the most vulnerable time for a child's survival. Neonatal mortality is becoming

increasingly important not only because the proportion of under-five deaths that occur during the neonatal period is increasing as under-five mortality declines, but also because the health interventions needed to address the major causes of neonatal deaths generally differ from those needed to address other under-five deaths and are intimately linked to those that are necessary to protect maternal health. Globally, the neonatal mortality rate fell from 33 deaths per 1,000 live births in 1990 to 20 in 2013 and the number of neonatal deaths declined from 4.7 million in 1990 to 2.8 million in 2013(WHO, 2014).

World Regional Immunization Coverage

According to WHO (2013) an estimated 21.8 million infants remained unvaccinated. The estimates tell a success story for the Expanded Programme on Immunization, namely that global coverage with vaccines, measured by the proportion of kids who received three doses of vaccines containing diphtheria tetanus-pertussis (DTP3), rose from 73 per cent in 2000 to 84 per cent in 2013, which is a substantial increase. The numbers still fall short of the goal set out in the Global Vaccine Action Plan, which was endorsed by the World Health Assembly in 2012. That plan, which aims to prevent millions of deaths through more equitable access to vaccines, has a target of 90 per cent coverage for all vaccines by the year 2020. Three of W.H.O's regions reported very high immunization coverage: the Western Pacific with 96 per cent; the European Region with 96 per cent; and the Region of the Americas with 90 per cent. Coverage was slightly lower in the Eastern Mediterranean Region at 82 per cent; in the South-East Asia Region at 77 per cent; and in the African Region at 75 per cent.

CONCLUSIONS AND RECOMMENDATIONS

Immunization with its great advantage of preventing sickness and death of children especially the farm child (who is often malnourished, lives in an unhygienic condition, plagued with poverty) has achieved much in combating child killer diseases in the recent past. Unfortunately much still need to be done if set target of 90% coverage is to be achieved by 2015. Though the World Health Organization (WHO) has removed Nigeria from Polio-Endemic List (WHO, 2015) there is still the need to achieve the set target of 90% coverage of immunization, the Primary Health Care department at all tiers of government - Federal, state and local government must be financially strengthened, technically equipped and institutionally fortified so that they can increase their drive towards achieving the set target of 90% coverage in this year 2015.

The strategy of house to house immunization by health rangers can be

strengthened across the states of the federation with special consideration for the rural children who most often are disadvantaged because they reside in difficult terrain with limited access. There should be improved special allowances for the health workers posted to the rural areas for house to house immunization.

Finally, in order to have accurate and up to date data, there should be a compensation mechanism for any reported case of attack and or death as a result of any of the immunization preventable child killer diseases. Training and retraining of public health workers should be given priority.

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Table 1: Vaccine Preventable Diseases, Symptoms and Vaccines

Name of Disease	Symptoms	Name of Vaccine
Diphtheria	Diphtheria causes a thick covering in the back of the throat. It can lead to difficulty in breathing, heart failure, paralysis, and even death.	Diphtheria toxoid
Haemophilus influenzae type b (Hib)	The most common severe types of Haemophilus influenzae disease are: Pneumonia (lung infection){ Fever (but older people may have lower than normal body temperature), Cough, Shortness of breath, Chills, Sweating, Chest pain that comes and goes with breathing, Headache, Muscle pain, Excessive tiredness • Bacteremia (bloodstream infection) • Meningitis (infection of the covering of the brain and spinal cord)	Hib vaccines
Hepatitis A	Potentially none (likelihood of symptoms decreases with the person's age. If present: yellow skin or eyes, tiredness, stomach ache, loss of appetite, or nausea	Hepatitis A vaccine
Hepatitis B	Potentially none when first infected (likelihood of early symptoms decreases with the person's age) If present: yellow skin or eyes, tiredness, stomach ache, loss of appetite, nausea, or joint pain	Hepatitis B vaccine
Influenza (Flu)	Fever* or feeling feverish/chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue (very tired). Some people may have vomiting and diarrhea, though this is more	flu vaccine

	common in children than adults.	
Measles (Rubeola)	Fever, rash, runny nose, red eyes	measles-mumps-rubella (MMR) vaccine
Meningococcal Meningitis	Sudden onset of fever, headache, and stiff neck, Nausea, vomiting, photophobia (increased sensitivity to light),altered mental status (confusion)	Meningococcal Vaccination
Mumps	The puffy cheeks and swollen jaw that it causes. Fever, Headache, Muscle aches, Tiredness, Loss of appetite, swollen and tender salivary glands under the ears on one or both sides (parotitis)	Measles-mumps-rubella shot (called the MMR shot).
Pertussis (whooping cough)	Cold-like symptoms and maybe a mild cough or fever. After 1 to 2 weeks, severe coughing can begin. Unlike the common cold, pertussis can become a series of coughing fits that Runny nose, low-grade fever (generally minimal throughout the course of the disease), Mild, occasional cough, Apnea — a pause in breathing (in infants) continues for weeks.	Pertussis vaccine.
Pneumococcal pneumonia	Fever and chills, cough, rapid breathing or difficulty breathing, chest pain	Pneumococcal conjugate vaccine (PCV13 or Prevnar 13®), protects against the 13 types of pneumococcal bacteria

Polio, or poliomyelitis	72 out of 100 will not have any visible symptoms. About 1 out of 4 people with poliovirus infection will have flu-like symptoms that may include—Sore throat, Fever, tiredness, nausea, headache, stomach pain. Paralysis is the most severe symptom	Two types of vaccine protect against polio: oral poliovirus vaccine (OPV) and inactivated poliovirus vaccine (IPV) (given as an injection in the leg or arm, depending on the patient's age)
Rotavirus disease	Children who get infected may have severe watery diarrhea, often with vomiting, fever, and abdominal pain. Vomiting and watery diarrhea can last from 3 to 8 days. Additional symptoms include loss of appetite and decrease in urination, dry mouth and throat, feeling dizzy when standing up and dehydration.	Rotavirus vaccines(RotaTeq® (RV5),and Rotarix® (RV1))
Rubella, (German measles or three-day measles)	Rash that starts on the face and spreads to the rest of the body, Low fever (less than 101 degrees)	Rubella vaccine (contained in MMR vaccine)
Tetanus	Headache, Jaw cramping, sudden, involuntary muscle tightening – often in the stomach (muscle spasms), painful muscle stiffness all over the body, trouble swallowing, Jerking or staring (seizures),fever and sweating, high blood pressure and fast heart rate.	Tetanus vaccines (DTaP, Tdap, DT, and Td)
Chickenpox	Classic symptom of chickenpox is a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs. high fever, tiredness, loss of appetite, headache	Chickenpox vaccine. C

Source: Compiled from Centre for Diseases Control and Prevention official Website (2015)

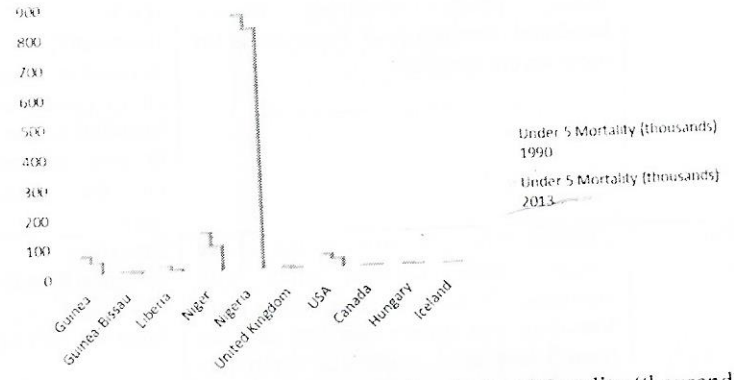

Figure 1: showing country estimates of under-five Mortality (thousands)
Source: UNICEF, 2014

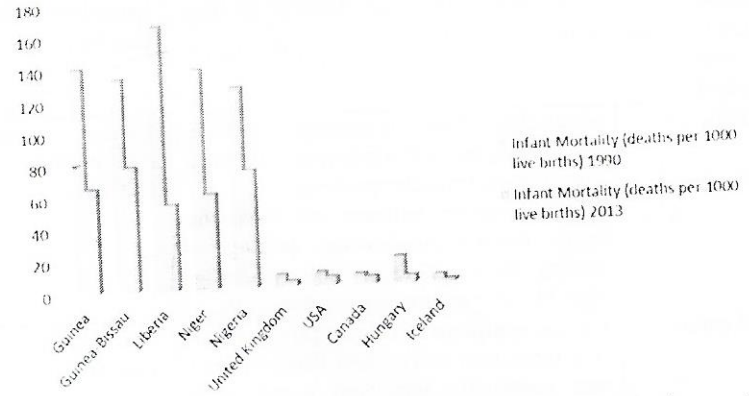

Figure 2: showing country estimates of infant mortality (deaths per 1000 live births)
Source: UNICEF, 2014

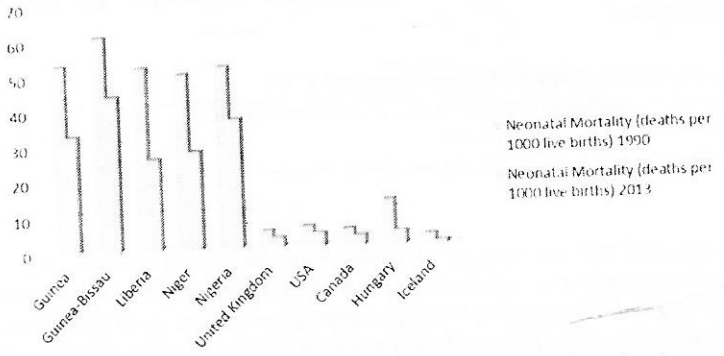

Fig 3: showing country estimates of neonatal mortality (deaths per 1000 live births)
Source: UNICEF, 2014

Definitions

Under-five mortality rate: *Probability of dying between birth and exactly five years of age, expressed per 1,000 live births.*

Infant mortality rate: *Probability of dying between birth and exactly one year of age, expressed per 1,000 live births.*

Neonatal mortality rate: Probability of dying in the first month of life, expressed per 1,000 live births

Each of these categories of persons contributes in varied ways to agricultural production just as they are differently influenced by it.

Ajani *et al.* (2015) posited that rural youths have limited access to institutions, markets, employment opportunities and public services, agricultural enterprises represent a sustainable forum to engage the youths productively. In their own contribution, Gwary *et al.* (2011) noted that agricultural activities serve as a tool for providing employment opportunities for the youths, thereby alleviating poverty and youth delinquencies. The importance of this is not ambiguous as youths are generally characterised by abundant energy and restlessness. This according to Ogunbameru (2011) necessitates proper channelling and harnessing for increased agricultural production.

The involvement of the youths in agricultural activities will not only create a career opportunities for them but it will also result in increase in the national food production and consequent reduction in the gap between deficit food production and high demand, thereby fostering food security (National Directorate of Employment (NDE), 2003). It is therefore, of paramount importance to encourage youth in agriculture. In view of this, Ajani *et al.* (2015) reflected that rural youths in Nigeria have the potentials needed to participate effectively in agricultural development. Youth involvement in agricultural activities will therefore create career opportunities for the youths alongside increasing food production and to a large extent reducing the gap between food production and its demand in the community (NDE, 2003).

According to Eremie (2002), rural youths have being adjudged as having much earlier and greater involvement in work roles and have opportunity of becoming economically independent earlier than their urban counterparts. This made the case for the stand that the agricultural entrepreneurship interventions should be mostly rural youths centered. Succinctly, Gwary *et al.* (2011) explained entrepreneurship as the process by which individuals become conscious of business ownership as an option or viable alternative, develop ideas for business, learn the process of becoming an entrepreneur and undertake the initiation and development of a business.

Specifically, youth entrepreneurship encompasses the practical application of enterprise qualities, such as initiation, creativity, innovation, marketing and risk taking by youths into work environment of either self-established or employment in small start-up firms by employing appropriate skills necessary for

success in that environment (Adepeju, 2009). Agricultural marketing system is a link between the farm and the non-farm sectors. It involves all the aspects of market structure or system, both functional and institutional, based on technical and economic considerations, and includes pre and post-harvest operations, assembling, grading, storage, transportation and distribution. A dynamic and growing, agricultural sector requires fertilisers, pesticides, farm equipment, machinery, diesel, electricity and repair services which are produced and supplied by the industry and non-farm enterprises. The expansion in the size of farm output stimulates forward linkages by providing surpluses or food and natural fibres which require transportation, storage, milling or processing, packaging and retailing to the consumers (Adepeju, 2009 and Gwary *et al.*, 2011).

Theoretical Framework

The general theory of marketing is adopted for this study. This theory postulated by Bartels (1970) was formerly seen as the sum of seven areas of research: theory of social initiative: theory of economic (market) separations: theory of market roles, expectations, interactions: theory of flows and systems: theory of behaviour constraints: theory of social change and marketing evolution: and theory of social control of marketing. Two years later, he condenses these seven areas into five fields of interest: "theory of marketing functions, theory of historical institutional evolution, theory of small versus large scale activity, theory of integration, and theory of specialization"

Later, Hunt (1983) in his concept of the "fundamental explanada" argued for a general theory of marketing to embrace four general theories in marketing: the behaviors of buyers directed at consummation exchanges: the behaviors of sellers directed at consummating exchanges: the institutional framework directed at consummating and/or facilitating exchange; the consequences of the behaviors of buyers, sellers and institutional framework on society.

These theories are applicable to this study in that, the behavioural interactions between the agricultural produce youth marketers (sellers), the institutional framework (community market) and the consumers (buyers) in the community would suggest whether the level of involvement of rural youth in agricultural produce marketing is very high involvement high, moderate, low and no involvement. This was based on the consideration of the results of youth involvement in agricultural produce marketing using processes such as decision making, allotting time for enterprise activities, managing of resources and directing the performance of planned works, deploying labour for plans and sharing of information or innovation with others among others.

This means that youth's involvement in marketing agricultural produce for the long term for purpose of becoming successful entrepreneurs should embody their participation in wide array of agricultural enterprise management processes or activities. Nnadi and Akwiwu (2008) asserted that the farm family is closely-knit that trodden lines cannot be easily drawn to distinguish definite roles and responsibilities of members in agricultural production: it is pertinent to investigate how well the youths are faring in the running of agricultural enterprises. Based on this and the dearth of empirical evidence on youth involvement in the management of agricultural enterprises, this study was conceived to fill the gap in literature.

Objectives of the study

This study sought to accomplish two specific objectives and these are to

i. determine the level of youths involvement in marketing of agricultural produce; and
ii. examine the constraints to youth involvement in marketing of agricultural produce.

Hypothesis of the study

An hypothesis was formulated and stated in the null form as follows:

Ho: There is no significant relationship between the socio-economic characteristics of the youths and their level of involvement in marketing agricultural produce

METHODOLOGY

The study area was Osun State. The targeted population for the study was the youths aged between 15 and 35years in the state. A multi-stage sampling procedure was adopted for selecting the respondents. At the first stage, 50 percent of the six administrative zones in the state were randomly selected, making 3 zones, namely: Ife, Ikirun and Ede. In second stage, two Local Governments Areas (LGAs) having functional prominent community markets were purposively selected from each of the three zones. In the third stage, one community market was selected from each LGA namely: Akinola market in Ife north, Olode market in Ife south, Thursday (Alamisi) market in Ifelodun, Oja Oba market in Ila Orangun, Oja Oba in Ede north and Sekona market in Ede south respectively. Lastly, 20 respondents were sampled in each markets centre using snow-ball sampling technique.

Measurement of Dependent Variable

The dependent variable for this study was the youth involvement in agricultural produce marketing and it was measured using Likert-type scale in variation of very high involvement scored 4, high 3, moderate 2, low 1 and no involvement 0. The respondents were asked to indicate their level of involvement in listed agricultural produce marketing processes and a score was generated from this as the involvement score. Six constraints listed were equally measured on five-point rating scale of

highly severe 4, severe 3, mildly severe 2, not severe 1 and not a constraint or don't know 0. The data obtained were analyzed using frequency counts, percentages, mean and standard deviation as well as correlation analyses.

RESULTS AND DISCUSSION

Data in Table 1 show the results of the respondents' personal and socio-economic characteristics. It was revealed among others that many (61.7%) of the respondents were aged 26-30 years with mean age of 27.08 ± 3.28years. Majority (73.4%) of them were females, while the males constitute 26.6 percent. Also, majority were married (82%) with mean household size of 3.2 ± 0.950. Most (74.2%) of the respondents had maximum number of 12years spent in formal education.

These results supported NAYES (2008) youth age categorisation and indicated that most of them did not go beyond secondary school education. It is equally depicted that the rural youths are mostly married people who have started procreation and they earn ₦6116.6 on the average per week. This finding is in line with that of Nnadi, and Akwiwu (2008) who noted that young people in rural areas get married earlier and become involved in adult responsibilities. Adisa (2001) among other studies have established that rural people characteristically have large family size, the relative small household size of the youths divulged here is unarguably due to their being newly married.

Types of Agricultural Produce Marketed by the Respondents

Evidence in Table 2 show the results of crop-based enterprises in which the respondents are involved. It was shown that one third (33.3%) of the respondents engaged in banana/plantain enterprise, 27.5 percent engaged in orange enterprise, 16.6 percent engaged in yam enterprise, 9.2 percent engaged in kolanut enterprise, 7.5 percent engaged in palm oil enterprise, 6.7 percent engaged in yam/cassava flour enterprise, while 5.8 percent engaged in garri enterprise. This result is in line with point noted by Ayinde (2006) that agrarian societies are involved in production, processing, and marketing of Agricultural produce, while the rural youths were actively engaged in the various crop enterprises localized in their community. The opportunity to work and interact with people in many communities through buying and selling of the various crops could amount to motivating factor of the youth's engagement in the agricultural enterprises. However, the results directs attention to the youths interest in fruits based enterprises as almost two third of the respondents were indicated as engaged in citrus and banana/plantain enterprises.

Youth involvement in agricultural produce marketing

The result presented in Figure 1 shows that negligible proportions of the respondents indicated the options very high involvement and not involvement for each of the various agricultural produce marketing processes listed. Conversely, most of them were highly involved in decision making (95%), allotting time for enterprise activities (95%), managing of resources (94.2%) and directing the performance of planned works (91.2%) as well as deploying labour for plans (76.7%) and sharing of information or innovation with others (62.5%). However, only an insignificant proportion (2.5%) of the respondents was highly involved in the attendance of seminars and trainings for improvement entrepreneurial skills. More so, close to half (45%) of the youths noted they were highly involved in the supply of initiatives or ideas for marketing agricultural produce.

These results divulged that rural youth were highly involved in the various processes entailed in the agricultural produce marketing with the exception of seminars and trainings attendance for augmenting skills and increasing knowledge. This is likely due to inaccessibility or lack of such training facilities in rural communities as well as poor awareness on them. The high level of youth involvement in the other dimensions of agricultural produce marketing as shown in the findings might be attributed to farming, being the major occupation of the people in rural areas which leads to ample production of agricultural produce, which left many youths in the area with no option than to engage in agricultural related businesses given the scarcity of alternative livelihood means.

However, holistic evidence divulged here indicates that the youths have being socialized to manage and take adult responsibilities for the day to day running, growth and development of agricultural produce market. This implies that the rural youths have being groomed in the art and intricacies of agriculture and allowed to take up roles which would prepare them for independence. This is in view of the proposition of Hisrich and Peters (1998) that freedom and challenges predisposes one's choice of field or career, to be independent (to be his or her own boss) and work according to his or her own style. Thus, this finding further entrench the position that the rural youths constitute a formidable force on which the foundation of agricultural development in Nigeria can be laid as noted by Ajani *et al.* (2015).

Constraints to youth involvement in agricultural produce marketing

Data presented in Figure 2 show the results of the constraints mitigating youth involvement in agricultural produce marketing. It was revealed that poor marketing network was the only constraint deemed as highly severe by a sizeable proportion (39%)

of the youths just as about half (55%) of them equally noted it as severe. Likewise, most of the respondents (83.1% and 72.9%) indicated lack of credit support and security challenges, respectively, as severe to their involvement in the enterprises, while inconsistent government policy and lack of processing facilities were noted by only 28 percent each as severe constraints. About half (48.3%) of the respondents also noted lack of processing facilities as mildly severe constraint while 39 percent opined that inconsistent government policy was not a severe constraint.

Evidently, poor marketing network, lack of credit support and security challenges were the most heinous constraints delimiting youths' involvement in agricultural produce marketing. This seconds the findings of Ajani *et al.*, (2015) that youth involvement in agriculture is impeded by lack of competitive market for agricultural products, lack of start-up capital, inadequate labour saving technologies for ease of operations, inadequate finance/credit facilities, among others. Relatedly, the position of Gwary *et al.*, (2011) that lack of capital is a major constraint to youths agricultural produce marketing activities is underscored by the findings of this study. The underlining factors for these findings could be the characteristic poor or lack of organization of rural youths to work together in order to access standard urban based markets for the disposal of their produce as well as in forming cooperatives for credit sourcing and savings to fuel their enterprise activities. The deepening security challenges being faced in the country also portends a stumbling block for the youth's enterprise development.

Result of hypothesis testing

Results in Table 3 show that at 0.01 level of significant, there is a positive significant relationship between the level of youth involvement in agricultural produce marketing and their age ($r = 0.415$; $P \leq 0.01$), while other socio economic characteristics such as household size, years of formal education and income are not significantly related to the level of youth involvement in agricultural produce marketing. This result reveals that as the youths get older, their level of involvement in agricultural produce marketing also increases. This means that the teenage youths are less involved in agricultural enterprises compared to those nearing adult age. This basically illustrate that age is a vital determinant of when the youths could be given freehand to manage agricultural enterprises or act independently in the same respect. In essence, teenage youth's involvement may be limited in the management of some enterprise activities.

CONCLUSIONS AND RECOMMENDATIONS

In view of the considerable wide spectrum of areas in which the rural youths were found to function, this

study established that the rural youths are highly involved in the agricultural produce marketing. This means that the rural youths represent a significant factor to be reckoned with for the smooth running of agricultural enterprises. For this purpose, the study highlighted that the youths are constrained mostly by poor market, lack of credit and insecurity problems. Notably, the older youths were flagged as having higher expertise as a result of higher involvement in agricultural produce marketing than the teenage or young ones. Therefore, rural youths have being socialized to manage and take adult responsibilities for the day to day running, growth and development of agricultural produce market.

The study recommended among others that agricultural development stakeholders should encourage youths to organize themselves formally to access resources needed and repackage their products. Also, training on innovative strategies of agricultural production should be expanded for the rural youths.

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Table 1: **Distribution of respondents by their personal and socio economic-characteristics**
n = 120

Characteristics	Frequency	Percentage	Mean ± SD
Sex			
Male	29	24.2	3.21±0.950
Female	91	75.8	
Age:			
18-20	32	28.5	
Above 8	10	8.8	
21- 25	25	20.8	
26-30	74	61.7	
31 and above	14	11.7	
Years of formal education			
0-6 years			
20 16.7			
6-12 years	69	57.5	
13 years and above	31	25.8	
Incomeper week			
<2500	1	0.8	
2501-5000	53	44.2	
5001-7500	39	32.5	6116.67±1929.13
7501-10000	25	20.8	
10001 and above	2	1.7	
Marital status:			
Single	17	14.5	
Married	96	82.1	
Divorced	4	3.4	
Widowed	0	0	

Source: Field survey, 2015

Table 2: Distribution of respondets by Types of Agricultural Produce Marketed

Agricultural produce	Frequency	Percentage	Mean ± SD
Banana/Plantain	40	33.3	
Orange	33	27.5	
Yam	20	16.6	
Kolanut	11	9.3	
Palm oil	9	7.5	
Garri	7	5.8	

Source: Field survey, 2015

Table 3: result of correlation analysis between socio-economic characteristics of youth and level of involvement in Agricultural enterprises

Variables	Correlation coefficient (r)	p-value	Decision
Age	0.415**	0.000	S
Household size	0.134	0.159	NS
Years of formal education	-0.041	0.654	NS
Income	0.131	0.514	NS

Source: Field survey, 2015
**Significant at 0.01
S= significant,
NS= not significant

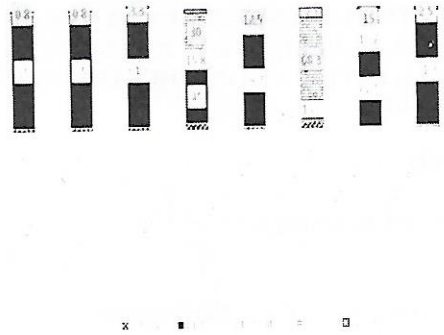

Figure 1: Youth involvement in agricultural produce marketing
Source: Field survey, 2015

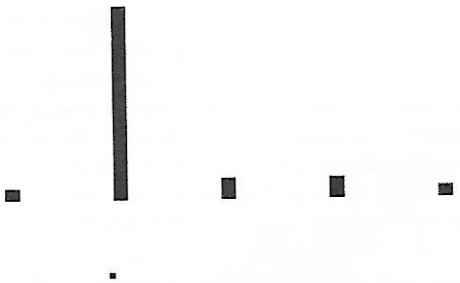

Figure 2: Constraints to youth involvement in agricultural produce marketing

Source: Field survey, 2015

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GENDER-SENSITIVITY IN THE EXTENSION ACTIVITIES OF UNIVERSITY-BASED RURAL DEVELOPMENT PROJECTS IN SOUTHWESTERN NIGERIA: IMPLICATION FOR FARM YOUTHS' INTEREST IN AGRICULTURE

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The study was conducted with the purpose of unveliinl the gender gap in the interest in extension activities of University-Based Rural Development Projects (UBRDPs) by farm youths in southwestern Nigeria. The study investigated the personal characteristics of farm youths under the coverage of UBRDPs, UBRDPs' extension activities benefitted by farm youths, and the level of interest in the projects' extension activities. Ninety-six respondents were interviewed for the study via structured and pre-tested interview schedule, in the two purposively selected UBRDPs using a multistage sampling technique. Many (male=80.0%, female =60.0%) of the respondents were found within the age bracket of 21 to 30 years. Both male and female farm youths (84.1 and 70.4%), respectively had high interest level in UBRDPs' extension activities. Moreso, the findings revealed that at p= 0.01, there were significant differences in the level of interest in UBRDPs' extension activities by farm male and female youths. The study concludes there was higher interest in extension activities of UBRDPs among male farming youths than that of their female category. It was recommended that gender sensitive and equality principles should be mainstreamed into packaging of extension activities of UBRDPs through effective programmes, clear linkage and active gender participation in the projects' activities in Nigeria.

Keywords: Gender, Extension Activities, Interest.

INTRODUCTION

The University-Based Rural Development Projects (UBRDPs) is borne out of the need for universities to fulfill their social corporate responsibility to the immediate communities who host them. The projects were modeled after the Cooperative Extension System of the United States (Ogunfiditimi and

Ewuola, 1995) and tagged as part of the third role of the tripartite roles (teaching, research and community service) of universities. The approach is anchored by Faculties/Colleges/Universities of Agriculture as the case may be; although they have small area of coverage, nevertheless they are demand-driven, have in place highly technical staff, access to research reports of their academic departments, connections with research institutes and other development agencies, high quality services which are integrated in nature in implementing developmental programmes to selected rural communities and these developmental efforts are geared towards improving the livelihood of the rural dwellers (Adeloye, 2016).

Some of the UBRDPs are: Isoya Project of Obafemi Awolowo University Ile-Ife (OAU); Okpeju Project of University of Nigeria, Nsukka (UNN), Badeku Project of University of Ibadan and Kwara Project of Ahmadu Bello University (ABU), Zaria. In addition all the universities of agriculture, that is Federal University of Agriculture Abeokuta (FUNAAB), Federal University of Agriculture Makurdi (FUAM) and Michael Okpara University of Agriculture Umudike (MOUAU) also have their own projects.

A number of studies have been carried out on different aspects of university-based rural development projects in Nigeria such as: United State Agency for International Development (USAID) in 1988 that conducted a research on three Nigerian universities and their role in agricultural development; Dipeolu, Adebayo and Fabolude (1998) who examined optimal farm plans for sustainable environmental and economic resource use for food crop farmers in Federal University of Agriculture, Abeokuta (FUNAAB) model extension villages; Madukwe, Okoli and Eze (2002) who carried out study on analysis and comparism of the Agricultural Development Programme (ADP) and University agricultural technology transfer systems in Nigeria; Laogun, Olayinka, Olubunmi, Alimi, Farinde and Amujoyegbe (2003) who studied Isoya rural development project in relation to food security in Nigeria; Okunade (2007) who determined the accessibility of agricultural credit and inputs to women farmers of Isoya Rural Development Project; and Adisa and Adeloye (2013) who examined the organization and management of farmers' groups under Isoya rural development project.

The foregoing reviews dwelt on various studies on UBRDPs in Nigeria. While findings of some of the studies acknowledged the prospects of the projects, none of the study focused on gender- sensitivity of the projects especially among the

farm youths, that is, people from ages 18 to 40 as defined by Children and Youth In Agricultural Programme (GYIAP-Network, 2006) after taken cognizance of the circumstances of poverty, unemployment and deprivations that prevalent in Nigeria and some other developing countries which make some people to still depend on others for survival, protection and development up to the age of 40 years. Therefore, the study aimed to unveil the gender gap in the participation of farm youths in extension activities of UBRDPs in Southwestern Nigeria.

Purpose of the study

The main objective of the study was to draw implication for farm youths interest in Agriculture through assessing gender-sensitivity of UBRDPs' extension activities in southwestern Nigeria. The specific objectives were to

i. gender disaggregate the personal characteristics of the farm youths under the coverage of UBRDPs in the study area;

ii. identify the projects' extension activities benefited by farm male and female youths; and

iii. assess level of interest of farm male and female youths in the projects' extension activities.

Hypotheses of the Study

i. There is no significant difference between farm male and female youths' interest in extension activities of UBRDPs.

METHODOLOGY

The study was carried out in communities in southwestern Nigeria under the coverage of the UBRDPs. Southwestern Nigeria comprises UBRDPs such as Isoya Project of Obafemi Awolowo University Ile-Ife (OAU); Badeku Project of University of Ibadan (UI); Agricultural Media Resources and Extension Centre (AMREC) model villages' development project of Federal University of Agriculture, Abeokuta (FUNAAB).

A multi-stage sampling procedure was used to select respondents (projects beneficiaries) for the study. At first stage, two UBRDPs were purposively selected from the zone based on full spring activities going on in the outreach communities, that is, AMREC and Isoya model villages' development projects (covering 58 and 24 communities, respectively), at the second stage, using proportionate sampling technique, twenty-five per cent of the benefiting communities in each of the UBRDPs was selected

making 21 communities (15 and 6 communities from AMREC and Isoya projects respectively). Finally, at third stage, a systematic random sampling technique, with a random start at an interval of two using beneficiaries' register as sampling frame was used to select 96 farm youths, that is, 51 boys and 45 girls (72 and 24 from AMREC and Isoya projects respectively) for the study.

A pre-tested interview schedule was used to elicit information on personal characteristics of the respondents, UBRDPs' extension activities for farm youths, and levels of interest of farm male and female respondents in UBRDPs' extension activities. The data were summarized using descriptive statistics, while Analysis of Variance (ANOVA) was used to draw inferences from the hypothesis.

RESULTS AND DISCUSSION

Personal characteristics of male and female farm youths

Results in Table 1 reveal that (17.7%) of male farm youth benefiting from UBRDPs were within the age group of 20 years and below, (49.0%) of male respondents were found within the age bracket of 21 to 30 years while (33.3%) of male respondents were found within the age bracket of 31to 40. The mean age of the male respondents was 32.7 with standard deviation of 9.26. In addition, in the female category, (11.1%) were found within the age group of 20 and below, (60.0%) were within the age bracket of 21 to 30 while (28.9%) were within the age group of 31 and 40. The mean age of the female respondents was 28.5 with standard deviation of 6.7. More so, Table 1 also reveals that many (54.9%) of male respondents practiced Christianity, while in the female category, many (60.0%) of respondents interviewed for the study practised Islam. This implies that Christianity and Islam are the dominant religion practiced in the study area. In addition the study revealed that majority (70.6%) of male respondents were single male while in female category, majority (73.3%) were married.

In addition, Table 1 also shows that few (9.8%) of male respondents did not attain any formal education, (47.1%) attained primary education, and (43.1%) attained secondary education. However, in the female category, (20.0%) of respondents did not have formal education, (26.7%) attained primary education, and (53.3%) attained secondary education. This implies that percentage of respondents with no formal education is lower among male than that of female, and it could therefore be deduced from the study that literacy level among male respondents is relatively high. This could be due to the fact that parents cherish male education than the female education in this part of the country. This supports the findings of Deji and Koledoye (2013) which posited that there was

gender discrimination in education among rural dwellers in Ondo State, Nigeria.

Identification of extension activities of UBRDPs benefitted by the respondents

Results from Table 2 reveal that 12 extension activities were identified by both male and female farm youths in which they benefited from UBRDPs in the study area: these were Agriculture in secondary school, group formation, linkage with collaborating agencies, inputs procurement, training on arable farming, agricultural programmes on media, workshop on personal hygiene, training on bead making, training on hat making, training on rug making, training on liquid detergent making, and training on drug use, misuse and abuse.

Results in Table 2 also reveal that linkage with collaborating agencies ranked highest on the list of extension activities benefited from UBRDPs by male respondents while in the female category, training on drug use, misuse and abuse ranked highest on the list of extension activities benefited from UBRDPs.

Levels of interest in extension activities of UBRDPs by the respondents

Results in Figure 1 revealed that 5.7 percent of male and 10.5 percent of female farm youths had low level of interest in extension activities of UBRDPs while (10.2 and 19.1%) of male and female respondents, respectively had moderate interest level in extension activities of UBRDPs, while 84.1 percent of male and 70.4 percent of female respondents had high level of interest in extension activities of UBRDPs. The findings indicated that there was a high level of interest in extension activities of UBRDPs among the male and female farm youths in the study area. This could be due to the source of these activities, that is universities, known for quality service delivery.

Hypothesis test

Result in Table 3 indicated a significant difference in interest in extension activities of UBRDPs between male and female farm youths. The F-value of 65.59 at the significance value of 0.000 was less than 0.05 level of significance (F= 65.59, Sig.= 0.000). Hence, the decision to reject the null hypothesis was established. This implies that relative to interest in extension activities of UBRDPs between male and female farm youths in the study area, there is a disparity.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, it was concluded that linkage with collaborating agencies ranked highest

on the list of extension activities benefited from UBRDPs by male farming youths while training on drug use, misuse and abuse ranked highest among the female category. Also, there was higher interest in extension activities of UBRDPs among male farming youths than that of their female category. It was recommended that gender sensitive and equality principles should be mainstreamed into packaging of extension activities of UBRDPs through effective programmes, clear linkage and active gender participation in the projects' activities in Nigeria.

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Table 1: Distribution of respondents by their personal characteristics

Personal characteristics	Males (n=51) Frequency	Males (n=51) Percentage	Female (n=45) Frequency	Female (n=45) Percentage
Age (years)				
Below 20	9	17.7	5	11.1
21-30	25	49.0	27	60.0
31-40	17	33.3	13	28.9
Religion affiliation				

Christianity	28	54.9	18	40.0
Islam	20	39.2	27	60.0
Traditional	3	5.9	-	-
Marital status				
Single	36	70.6	12	26.7
Married	15	29.4	33	73.3
Level of education				
No formal education	5	9.8	9	20.0
Primary education	24	47.1	12	26.7
Secondary education	22	43.1	24	53.3

Source: Field survey, 2015

Table 2: Distribution of respondents by extension activities of UBRDPs benefited from

*Extension activities	Male (n=51) Frequency	Percentage	Rank	Female (n=45) Frequency	Percentage	Rank
Agriculture in secondary school	25	49.0	8th	15	33.3	11th
Group formation	48	94.1	2nd	40	88.9	3rd
Linkage with collaborating agencies	50	98.0	1st	35	77.8	8th
Inputs procurement	30	58.8	7th	32	71.1	9th
Training on arable	35	68.6	5th	15	33.3	11th

farming						
Agricultural programmes on media	45	88.2	3rd	40	88.9	3rd
Workshop on personal hygiene	35	68.6	5th	42	93.3	2nd
Training on bead making	10	19.6	11th	40	88.9	3rd
Training on hat making	8	15.7	12th	38	84.4	6th
Training on rug making	20	39.2	9th	30	66.7	10th
Training on liquid detergent making	15	29.4	10th	38	84.4	6th
Training on drug use, misuse and abuse	45	88.2	3rd	43	95.6	1st

*Multiple choices
Source: Field survey, 2015

Table 3: Analysis of variance showing the difference in interest in extension activities of UBRDPs between male and female respondents

	Sum of squares	DF	Mean square	F	Sig
Between Groups	2.391E13	1	2.391E13	65.588	.000

Within Groups	1.782E14	489	3.645E11
Total	2.021E14	490	

Significant at p≤ 0.05 level (2-tailed)
DF= Degree of Freedom
F= Analysis of variance value
Source: Calculated from field survey, 2015

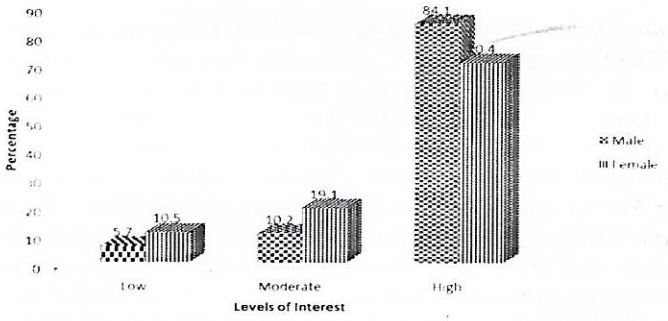

Figure 1: Distribution of respondents by levels of interest in extension activities of UBRDPs
Source: Field survey, 2015

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INVOLVEMENT OF RURAL YOUTHS IN BEEKEEPING MANAGEMENTPRACTICES IN OSUN STATE, NIGERIA: IMPLICATION FOR POLICY FORMULATION

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The study focused on the involvement of rural youths in beekeeping management practices in Osun State. Specifically, it described the respondents' demographic characteristics, the level of involvement of these rural youths in beekeeping management practices and the constraints associated with beekeeping management practices. About 240 respondents were proportionately selected from three groups of beekeepers namely Fadama, Freelance and Beekeeper association of Nigeria across three OSSADEP zones of Osun State. The data were analysed using descriptive and inferential statistics. Results of the analysis show that 60.4 per cent of the respondents were males while 39.6 per cent were females; the mean age of the respondents was 39.2 years with standard deviation of 10.2. About 98.3 per cent were involved in positioning bee hives on stand, 100 per cent in baiting to catch bee swarms while 100 per cent were involved in the sales of honey to neighbours and friends. Only few (34.6%) split colony into new hives while only 30.0 per cent had access to extension services once in a month. There was a significant relationship between the number of apiary yards of the rural youth and their level of involvement in beekeeping management practices, ($r = 0.258$; $p \leq 0.01$). It is concluded that youth will be productively engaged with beekeeping management practices as the number of apiary yards own by the youth increases. It was recommended that agricultural policy should be directed towards empowering the youth in the area of beekeeping management for livelihood sustainability.

Keywords: *Beekeeping , Youth, Involvement.*

INTRODUCTION

Africa has the youngest population in the world and each year 10-12 million of its young people seek to enter the continent's workforce, too many without success (Nteranya, 2015). This highlights the great challenge of youth unemployment but can also be seen as an opportunity for them to

become the engine driving new agriculture and agribusiness enterprises as well as rural transformation. The natural and human resources available in Nigeria if well utilized and managed should make the country a great nation (Agbato, S.O, 2008). Youth between the ages of 20 and 40 years constitute a substantial percentage of the total population in most part of the world. These age bracket are required for active farm work. Studies show that this group of people owns a less percentage of farms than the aged (Farinde, 1995 and Adesoji, 2002).

According to Contado (1996) youth have the time, energy and intelligence needed to learn and improve their knowledge and capabilities for positive change and development. The desired transformation in agriculture for national growth and development will be achieved if concrete steps are taken to enlighten and build the interest of the youth to discover the gains in the sector (Futa news, 2015). One advantage of agriculture as a profession is that it provides employment either directly or indirectly but despite these, many youth and younger generation's interest in farming are declining (Adekunle *et al.*, 2007). Youth face many hurdles in trying to earn a livelihood from agriculture and agribusiness. Pressure on arable land is high making it difficult to start new farms by the youth interested in primary agricultural commodity production. Youth lack access to credit, improved technologies, practical skills and fair markets necessary as well as other logistics and services for agribusiness success (Nteranya, 2015). Because of the way and manner farming has been practiced, encouragement has not been given to the youth who wants to be called farmer (Torimiro *et al.*, 2008).

According to Nteranya (2015) opportunity exists for directing African youth toward agribusiness, and if done in an inclusive manner, to profound societal and economic benefit. Many mechanisms toward this goal are being examined by several research, development and investment interests. The next critical step is to develop a comprehensive program that forges widespread commitment and partnership, combining these approaches in an effective manner and delivering cost-effective opportunities to youth for profitable agribusiness development. This effort must extend well beyond reorientation within formal training settings; rather it must involve the development of detailed agri-business plans and creditworthy loan applications, leading to the establishment of efficient and effective networks of new agri-business ventures and services across the entire agricultural value chain. It must be built upon commitment at the national levels, close collaboration among and with regional development partners to support an enabling environment, and requires investment by the private

sector and financial institutions. Equally important, the program must be attractive to youth, able to challenge counterproductive mindsets through building self-confidence, and local efforts must be led and owned by youth themselves. Overall, the interest of the youth must be aroused and kept sustainably.

Nevertheless, to engage the youth in agriculture and combat the difficulty of securing a job, rural youths tend to practice beekeeping in order solve the problem of poverty, make money and assist their parents through the sales of honey after harvest because it involves low capital for investment (Falade, 2013). As risks for the household can be reduced by differentiation of income generating activities as opposed to specialization, such differentiation can be pursued by the undertaking of a variety of farming activities, as opposed to concentration on a single crop or livestock, but by a balanced division of productive labour between farm and off-farm occupations and such farming activity that could be pursued is beekeeping for livelihood sustainability. Incidentally, beekeeping opportunity has not been adequately exploited due to lack of proper appreciation of beekeeping farming benefits and management practices by the rural populace as knowledge on improved beekeeping management practices, marketing, extension services and research are lacking (Ja'Afar-Furo *et. al.*, 2007). However, it is on this premise that the study sought to determine the involvement of rural youths in beekeeping management practices in Osun State.

Objectives

The main objective was to determine the involvement of rural youths in beekeeping management practices in the study area, while the specific objectives were to:

i. describe the demographic characteristics of the rural youth beekeepers
ii. determine the level of involvement of rural youth in beekeeping management practices
iii. identify the constraints associated with rural youth involvement in beekeeping management practices.

Hypothesis

There is no significant relationship between selected socio-economic characteristics of rural youth and their level of involvement in beekeeping management practices.

METHODOLOGY

The study was carried out in Osun State. The predominant occupation is farming and while other stable occupations among the people are mainly craftwork and trading.

A multi-stage sampling technique was used to select respondents from the three OSSADEP zones of Osun state

namely Iwo, Ife-Ijesa and Osogbo. The first stage involved purposive selection of two LGAs in each OSSADEP zone based on predominance of beekeeping enterprise. At the second stage, the beekeepers in the selected LGAs were stratified into three groups' namely, Fadama, Freelance, and Beekeepers Association of Nigeria. The third stage involved a proportionate selection of beekeepers from the three groups. A total of 240 beekeepers were interviewed for the study. Data was collected using structured interview schedule and Focus Group Discussion guide and were analysed using appropriate descriptive and inferential statistics, such as frequency count, percentages, mean, standard deviation and correlation analysis respectively. The dependent variable is the involvement of the respondents in beekeeping management practices which was measured by asking the respondents to indicate their involvement in 54 list of beekeeping management practices. The independent variables considered were Sex, Age, Religion, Marital status, Years of formal education, Annual income, Number of apiary yards, Indigenous status, External orientation, Extension services contact and problems militating associated with beekeeping management practices.

RESULTS AND DISCUSSION

Table 1 shows the demographic characteristics of the respondents.

Results in Table 1 show that Few (21.8%) of the respondents were below or equal the age 30 years and about 38.3 per cent were between age 31 to 40 years, while 30.4 per cent were between age 41 to 50 years. However, the mean age of the respondents was 39.2 years with standard deviation of 10.2. The above findings also agreed with the findings of Nwachukwu and Jibowo (2000) who noted that most farmers were below the age of 50 years

Majority (60.4%) were males while 39.6 per cent were females. About 50 per cent of the beekeepers were Christian, 48.3 per cent being Muslim and only 1.7 per cent respondents claimed to be traditional religious believer. Majority (76.3%) were married, while 18.8 percent were single. About 40.0 per cent had 6 -10 family size while 23.3 per cent had family size of 5 and below, also 9.2 per cent had family size of 20 and above. Although, most of the respondents claimed that their family were participating in the management practices of beekeeping enterprise. Majority (95.1%) of the respondent was literate and they had some experience of formal education. About 34.6 per cent had more than 12 years of formal education, 31.3 per cent had between 10 - 12 years, about 25.0 per cent had between 7 - 9 years. Only few (5.0%) of the beekeepers never attended formal educational

institutions. The beekeepers had a mean of 11.9 years of formal education with a standard deviation of 4.6. This finding is in line with Soyebo (2005) and Alao (2010) that farmers in Osun State were literate. Therefore with increase in the level of education, beekeepers were likely to be helpful in extension program planning and implementation, more so as education plays a leading role in determining involvement in skillful activities.

About 52.5 per cent of the beekeepers had between ₦51,000 and ₦100,000 as their total annual income from beekeeping, also 22.8 per cent had between ₦101,000 and ₦150,000; Only 19.3 per cent had less than ₦50,000. However, this is still very low and just a very few of the beekeepers were truly earning huge income from the enterprise. Hence, there is the need to encourage the beekeepers to be actively involved the management practices for more income. This finding is in agreement with Tijani (2007) that annual farm income of a farmer determines the farmers' ability to purchase improved technology which may bring about increase in productivity and subsequently lead to higher income.

About 38.1 per cent of the respondents were residents between 11 and 20 years, while 36.7 per cent were residents between 21 and 30 years. However, long years of residing in a community do not necessarily mean that the respondents were indigenes of where they resided. Although staying long in a particular community might give such residents vital opportunities to access land which could be used for beekeeping enterprise.

Majority (90.4%) had never left the boundary of Nigeria and the mean years of beekeeping experience was 6.5 years with 2.6 as its standard deviation. This implies that the beekeepers were likely to acquire experience based on the local exposure on beekeeping management practices since most have not travelled outside their country although they have visited various communities in other states within the country. This is in line with Ekong (2010) that cosmopolitan leaders are those whose interests are broader than their local communities and they function on behalf of their communities because they are able to transcend their given limits while Fadare *et al.*, (2008) stated experience as one of the factors of successful beekeeping.

About 63.3 per cent claimed that they had been visited by extension agents while 36.7 per cent of the respondents had never been visited by extension agents on beekeeping. However, during the FGDs most of the respondents claimed that the extension agents were private individuals who conduct beekeeping seminars and trainings. Thus, beekeeping enterprise would only develop to its full potential if extension and research could be reinforced.

Figure 1 shows the information source on beekeeping management practices

The result in Figure 1 reveals that Majority (76.7%) of the respondents had information on the beekeeping management practices from friends who are beekeepers in the community. About 64.2 per cent had information from their neighbours. 58.3 per cent from Local farm organization while 42.9 per cent from family members. 36.7 per cent claimed Television. 28.8 per cent had information from the Internet. About 27.9 per cent had information from Agricultural shows. while 26.3 per cent had information from Extension agents. This implies that information on beekeeping management practices could be best communicated via farmer to farmer as this would reinforce inter-personal relationship among beekeepers. This finding is in agreement with Ayansola (2012) that many of the beekeepers claimed to have gained knowledge they were using through training by their friends and acquaintances.

Table 2 shows the respondents' involvement in beekeeping management practices

Apiary site preparation

Majority (98.3%) of the respondents were involved in positioning hives on stand. 90.0 per cent were clearing bush to the apiary. while 82.1 per cent create road paths to their apiary. About 67.5 per cent were involved in surveying land suitable to site apiary and 45.0 per cent were involved in planting bee forage. This is in line with Torimiro *et al.*, (2008) who described that good honey production begins with the right choice of site for the apiary. and the correct use of this site which should have sufficient shades with good air circulation.

Colony establishment in bee hives

All of the respondents were involved in baiting hives to catch bee swarms. and 34.6 per cent split colony into new bee hives. while 21.3 per cent buy bee colony. Only very few (0.4%) of the respondents were involved in the multiplication of colony with queens. This implies that beekeepers greatly depend on the natural multiplication of bee colony. while beekeepers are less involved in artificial means of colony multiplication. Focus Group Discussion excerpt reported much complaint on baiting process that the possibility of having a bee swarm is negligible. Lawal (2010) corroborates this finding. that most beekeepers still depend on nature to get bee colonies through baiting hives in Nigeria which is in contrast to what obtained in developed countries such as United States of America. where bees are bought as small nucleus or queen bees raised and sold in queen cages in order to expand into large colony.

Apiary management

A hundred percent of the respondents were involved in sourcing information on beekeeping enterprise. Majority (97.9%) of the respondents were maintaining their hives and

equipments, while 97.1 per cent were networking with other beekeepers and preventing pest and diseases respectively. Majority (90.4%) were involved in weeding the apiary, about 87.5 per cent were keeping record of apiary situations, while 75.4 per cent were involved in routine inspection of bee colony, 65.0 per cent were involved in pilfering and theft prevention. Few (21%) were preventing swarming and absconding, about 6.3 per cent of the respondents were involved in feeding the bees, while migratory beekeeping was the least with 4.2 per cent. This implies that some rural youths were more involved in only few management practices that would enhance more production and high profitability. Hence, there is the need to acquaint the farmers with the skills and importance of other practices they were least involved.

Harvest management

A hundred per cent of the respondent smoked the bee colony with smoker before opening. Majority (97.9%) inspected their hives prior to harvesting, and 92.1 per cent harvest sealed honey combs. About 72.9 per cent were monitoring flower blossoms for honey flow period. Implication of these is that beekeepers in the study area were involved in harvest management. The involvement of beekeepers in monitoring of flower blossoms is in line with Torimiro *et al*., (2008) that the time to harvest honey depends on the flowering period of the bee forage plants. Also, beekeepers harvesting sealed combs conforms with Gentry (2001) that capped or sealed comb cell with 2/3 filled with honey is ripe for harvesting while unripe honey not capped is watery and will ferment if harvested.

Honey processing

Majority (99.6%) of the respondents safely handle honey from food poisoning, about 87.9 per cent sieve honey with mesh, while 85.0 per cent extract honey with press, also 83.3 per cent allow honey to settle in tank before filling into jars. About 65.4 per cent of the respondents squeezed honey comb with hands, and only 9.2 per cent extracted honey with centrifugal extractor. This implies that some beekeepers use simple technology in processing their honey, however, the use of hand pressing is still common, while extracting honey with centrifugal extractor is least common. These findings agree with Ogunleye (2006) that the art of beekeeping includes the use of both crude and modern tools.

Honey packaging

A hundred per cent of the respondents were bottling in plastic jars, while 86.7 per cent were sealing and corking with stoppers, 51.3 per cent bottle in glass jars, only 30.8 per cent of the respondents were wrapping honey bottles in cartons. This implies that packaging of Honey is still at an infant stage in the study area.

Honey labeling

Majority (91.7 % and 91.3 %) of the respondent label their honey bottles with stickers and identified their contact addresses respectively. While 41.7 per cent indicated the weight, liters and price of the honey, only 38.3 per cent identified production and expiring dates and 30.8 per cent identified the nutritional contents. This finding corroborates Krell (1996) that many beekeepers find that creativity can be used to generate good labeling and packaging as well as to create attractive new products.

Wax processing

Few (44.6%) of the respondent stored extracted wax for other purposes and 43.3 per cent extracts beeswax by boiling in hot water. Very few (14.6%) of the respondents were extracting beeswax with solar wax extractor. This implies that rural youths are less involved in wax processing which could be additional income. This is similar with the findings of Fadare *et al*., (2008) among traditional and modern beekeepers in the Niger Delta area of Nigeria that only the modern beekeepers carried out beeswax preparation while 90 per cent of sampled traditional beekeepers threw away squeezed honeycombs after honey extraction with bare hands.

Sales and distribution

A hundred per cent of the respondents sold honey per liter and products were sold to neighbours and friends respectively. While 80.4 per cent sold products to wholesalers and retailers, about 63.8 per cent sold beeswax in grams. Few (12.1%) of the respondents export their products outside the country. This implies that most of the rural youths were trading their honey bee products within their locality to meet demand and large scale production had not been fully encouraged.

Figure 2 shows the challenges associated with beekeeping management practices

The results show that all respondents specified multiplication of colony and the absconding of bees from their hives as major problems respectively. This is similar to the finding of Visscher *et al*., (2001) that Africanized honey bees abscond (or abandon their nests). However, absconding is caused by a lack of nectar and pollen in a hive or by any undue disturbance of the colony.

The results further show that majority (82.5%) lament on the incidence of honey crystallization and majority (94.2% and 92.5%) of the respondents acknowledge that inadequate processing technology and inadequate storage facility were problem faced in the enterprise. This is in line with FAO (2010) for honey to remain as liquid, many honeys requires special processing and in countries where consumers want not only clean honey but also prefer liquid honey, consumer education may change their attitude, particularly where it is based on the

widespread but false belief that honey crystallizes because it is adulterated with sugar.

Among the major problems associated with beekeeping enterprise specified by the majority (85%, 82.5%, 82.1%, and 82.5%) of the respondents include inadequate access to land in order to site apiary and cost of investing in the enterprise, crystallization and low yield of honey with high pest diseases infestation of honey respectively, while about 70.8 per cent of the respondents specified the stinging propensity of bees. This implies that the involvement of rural youths were constrained as a result of inadequate access to land and cost of investing in the enterprise, also high pest and diseases infestation with seasonal low yield of honey, crystallization. This in agreement with Ojeleye (2016) that beekeepers mourn on low yield of honey as it crystallizes in the hives due to climate change.

Table 3 shows the correlation analysis between selected socio economic characteristics and level of involvement at significance level ($p \leq 0.01$).

The results show that there was a positive and significant relationship between rural youths' level of involvement in beekeeping management practices and selected socio economic variables such as years in school ($r = 0.167$; $p \leq 0.01$), sources of information ($r = 0.434$; $p \leq 0.01$) external orientations ($r = 0.192$; $p \leq 0.01$), income from beekeeping ($r = 0.362$; $p \leq 0.01$), years of bee-keeping experience ($r = 0.302$; $p \leq 0.01$) and number of apiary yards ($r = 0.258$; $p \leq 0.01$) of the respondents.

It could be inferred that the more the years a youth spend in school, the more enlightened he will be which might encourage involvement in a beekeeping enterprise. When more sources of information are available to rural youths on beekeeping enterprise, the higher would be the level of involvement in beekeeping management practices. This finding agrees with Fadare *et. al.*, (2008) that higher level of education enables increased access to relevant information that will stimulate honey production.

As a result of adventure of rural youth, youth travelling beyond their immediate environment will influence their level of involvement in beekeeping enterprise, because innovation varies across borders. Also, the more rural youths earn income in beekeeping enterprise, the more they will be involved. This implies that the motivating factor of most enterprise is the tangible profit that is made after the whole exercise. More income from beekeeping inspires the beekeeper to be devoted to the management practices in order to increase and sustain the proceeds.

The higher the experience in beekeeping, the higher the level of involvement in the enterprise. This

implies that rural youths who have spent appreciable number of years in beekeeping would have been exposed to some management practices of the enterprise, and with more number of apiary yards, the capacity to produce more becomes enlarge. Hence, rural youths tend to be actively involved with the management practices that will lead to higher profit.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings from this study it was concluded that most of the rural youths were rarely involved in beekeeping management practices, this might be as a result of low knowledge level of the management practices. Also youth will be productively engaged with beekeeping management practices if the number of apiary yards own by the youth increases.

Therefore, it is recommended that the least involved management practices by beekeepers should be enhanced with practical research and comprehensive trainings to encourage more youths to go into beekeeping enterprise for income generation in Nigeria. This could also be achieved if government and non-governmental organizations at all levels develop interest and research in beekeeping.

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Therefore, it is recommended that the least involved management practices by beekeepers should be enhanced with practical research and comprehensive trainings to encourage more youths to go into beekeeping enterprise for income generation in Nigeria. This could also be achieved if government and non-governmental organizations at all levels develop interest and research in beekeeping.

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Table 1:

Distribution of respondents by socio-economic characteristics

N = 240

Socio-economic characteristics	Frequency	Percentage	Mean	Standard Deviation
Age				
≤ 30	52	21.8		
31 – 40	92	38.3	39.2	10.2
41 – 50	73	30.4		
51 – 60	19	7.8		
61 – 70	4	1.6		
Sex				
Male	145	60.4		
Female	95	39.6		
Religion				
Christianity	120	50.0		
Islam	116	48.3		
Traditional	4	1.7		
Marital status				
Married	183	76.3		
Divorced	4	1.7		
Widowed	5	2.1		
Separated	3	1.3		
Single	45	18.8		
Household size				
1 – 4	58	24.2	5.9	1.8
5 – 8	159	66.3		
9 – 12	23	9.6		
Years of education				
	12	5.0		
	1			

No formal education	9	0.4		
1 – 3	60	3.8	11.9	4.6
4 – 6	75	25.0		
7 – 9	83	31.3		
10 – 12		34.6		
>12	46			
Annual Income from beekeeping	126	19.3		
(in naira "000")	55	52.5		
≤ 50	6	22.8	113,928	78,825
51-100	1	2.5		
101-150	1	0.4		
151-200	2	0.4		
201-250	3	0.8		
251-300		1.2		
301-350	59			
≥ 351	162	24.6		
Years of beekeeping experience	19	67.6		
≤ 4	0	7.9		
5 – 10	11	0.0		
≥ 11	72	4.6		
Frequency of visit by extension agents	69	30.0		
Once in a week	88	28.8		
Once in two weeks		36.7		
Once in a month				
Once in a year				
Never for once				

Source: Field Survey, 2014

Table 2(a): Distribution of respondents by the management practices in beekeeping enterprise

N = 240

Management practices	Frequency	Percentage	Mean	Standard Deviation

Apiary site preparation		
Surveying land suitable for bees	162	67 5
Bush clearing	216	90 0
Planting bee forage	108	45 0
Positioning bee hives on stand	236	98 3
Creating road to apiary	197	82 1
Colony establishment in bee hives		
Baiting to catch swarms	240	100 0
Buying bee colony	51	21 3
Colony multiplication with queens	1	0 4
Splitting colony into new hives	83	34 6
Apiary management		
Record keeping of apiary situations	181	75 4
Routine inspection of bee colony	210	87 5
Weeding the apiary	217	90 4
Pest and diseases prevention and control	233	97 1
Swarming and absconding prevention	50	20 8
Fire outbreak prevention	183	76 3
Pilfering or theft prevention	156	65 0
Artificial queen bee rearing	47	19 6
Feeding the bees	15	6 3
Migratory beekeeping	10	4 2
Maintenance of Hives and equipments	235	97 9
Employment of labour	143	59 6
Networking with other beekeepers	233	97 1
Training others on beekeeping	194	80 8
Sourcing information on beekeeping	240	100 0
Harvest management		
Monitoring flower blossoms	175	72 9
Inspection prior to harvesting	235	97 9
Smoking colony with smoker	240	100 0
Harvesting sealed honey combs	221	92 1
Honey processing		
Honey handled safely from food poisoning	239	99 6
Separating sealed combs from unsealed	189	78 8
Squeezing honey comb with hand	157	65 4
Extracting honey with press	204	85 0
Extracting with centrifugal extractor	22	9 2
Sieving honey with mesh	211	87 9
Settling honey in tank before filling in jars	200	83 3

*Multiple responses
Source: Field Survey, 2014

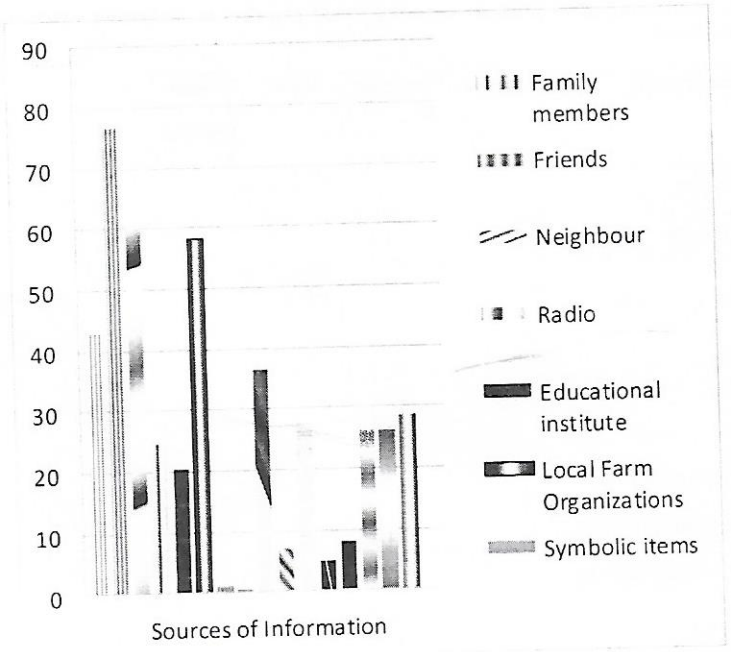
Table 2(b): Distribution of respondents by management practices in beekeeping enterprise continues:

N = 240

Management practices	Frequency	Percentage	Mean	Standard Deviation
Honey packaging				
Bottling in plastic jars	240	100.0		
Bottling in glass jars	123	51.3		
Sealing and corking with stoppers	208	86.7		
Wrapping honey bottles in cartons	74	30.8		
Honey labeling	220	91.7		
Labeling honey bottles with stickers	219	91.3		
Address and contacts are identified	92	38.3		
Production and expiring dates identified	74	30.8		
Nutritional contents are well spelt	100	41.7		
Weights, liters and price are indicated	104	43.3		
Wax processing	35	14.6		
Wax is extracted by boiling in hot water	107	44.6		
Wax is extracted with solar extractor	240	100.0		
Wax is stored for other purposes	109	45.4		
Sales and distribution	153	63.8		
Sell honey per liter	193	80.4		
Sell honey in grams	240	100.0		
Sell wax in grams	135	56.0		
Sold to wholesalers and retailers	29	12.1		
Sold to neighbour and friends				
Sold to supermarkets				
Export honey outside the country				

*Multiple responses

Source: Field Survey, 2014



Field survey 2014
Figure 1: Sources of information

Table 3: Correlation analysis showing the relationship between level of involvement in beekeeping enterprise and selected socio-economic characteristics

n. =240

Variables	r.	r^2
Age	0.031	0.001
Household size	0.037	0.001
Years in school	0.167**	0.028
Sources of information	0.434**	0.188
Cosmopoliteness	0.192**	0.037
Income from bee-keeping	0.362**	0.131
Income from other sources	0.104	0.011
Years of residence	-0.012	0.000
Years in bee-keeping	0.302**	0.091
Number of apiary yards	0.258**	0.067
Apiary distance	0.044	0.002

Source: Field survey, 2014
Level of significance = 0.01 ($p<0.01$)
Number of respondents = 240
** = correlation is significant at the 0.01 level (2-tailed)

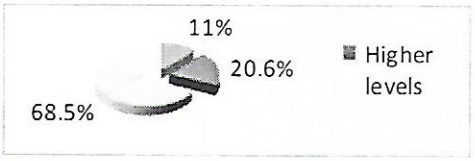


Figure 2: Pie chart showing farmers' level of involvement in beekeeping management practices (n. =240)
Source: Field survey, 2014

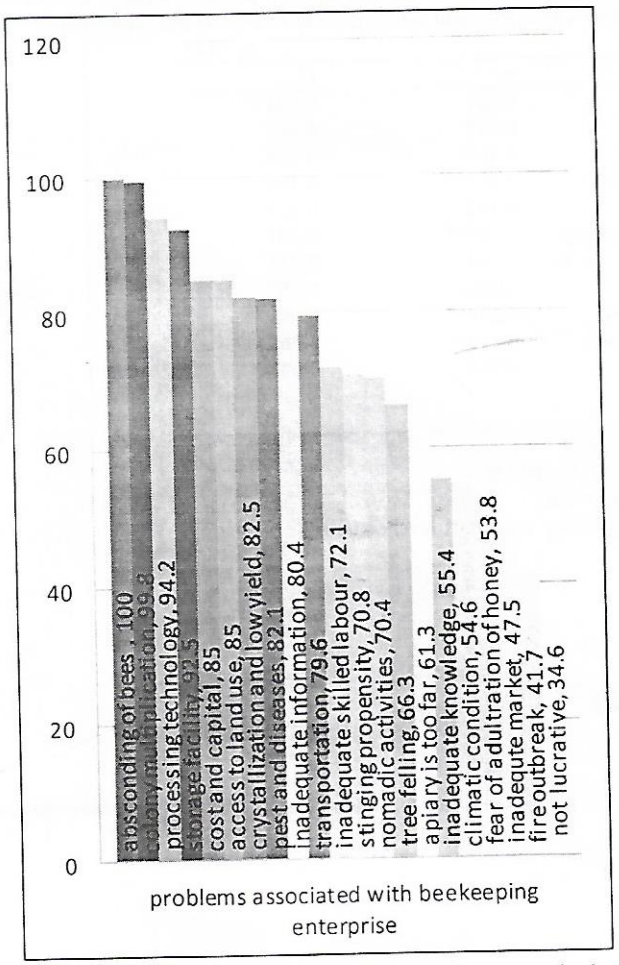


Figure 3: challenges associated with beekeeping enterprise in the study area.

Source: Field survey 20

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PERCEIVED EFFECTIVENESS OF THE COMMUNITY DEVELOPMENT SERVICE OF THE NATIONAL YOUTH SERVICE CORPS SCHEME IN HOST COMMUNITIES IN OSUN STATE

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Community development programmes are targeted towards the sustainable improvement of the quality of life of the broad spectrum of the populace. In spite of several community development programmes and interventions that have been implemented by successive governments and non-governmental bodies in Nigeria since independence, the country is still tagged a developing country. It is therefore pertinent to conduct a periodic review of all the developmental programmes and interventions to ascertain their relevance in transforming the country. Hence, this study assessed the perceived effectiveness of the community development service of the National Youth Service Corps Scheme in host communities in Osun State. A multi-stage sampling technique was used in selecting a total of 202 community member respondents. Primary data were collected from the respondents through the use of validated and structured questionnaires/interview schedule. Descriptive statistics such as frequency count, percentages and mean were used to describe the data while inferential statistics (Chi-square, PPMC and t-test) were used to draw inferences. It was found that the most common projects in the host communities were: provision of chalks and books for schools, donation of medical facilities and drugs, equipping of school libraries, donation of computer sets and construction of classrooms. Majority of the respondents (83.2%) perceived the provision of educational facilities as the most effective project of the CDS while 56% of the respondents considered the provision of infrastructural facilities as the least effective. Respondents were not satisfied with the availability and level of use of projects and so did not derive optimum benefits from the scheme. Respondents' age, sex, marital status, level of education and nativity ($r=0.094$, $x^2=0.064$, $x^2=6.930$, $x^2=11.662$, $x^2=0.07$, $p>0.05$ respectively) had no significant relationships with their perception of the effectiveness of the CDS projects. However, a significant relationship existed between the occupational status of the people and their perception of the effectiveness of the CDS ($x^2=6.886$, $p\leq0.05$).Also, a significant difference existed in the perceived effectiveness of the CDS of the NYSC in the rural and urban

communities (physical infrastructures t=-7.610, p -value=0.000; health facilities t=-3.612, p-value=0.000; educational facilities t=-2.370, p-value=0.019 and public utilities t=-3.684, p-value=0.000). Over all, the respondents perceived the effectiveness of the CDS of the NYSC as low. The study recommended a review of the policy and principles guiding the scheme in order to produce a more holistic and effective approach to community development service of NYSC with special preference for the provision of physical infrastructures.

Keywords: *Perception, effectiveness, community development service, national youth service corps members*

INTRODUCTION

Education, training, mobilization and utilization of youths toward national interest have a long standing origin in Africa and non-African countries as means of fostering national unity, curbing youths' restiveness and integrating the youths into national development (Ladele & Fadairo, 2007). According to Umoh (2006), Nigeria needs to explore the potentials of the youths for national development because the country is demographically dominated by youths with 71.5% of her total population below the age of 30 years. The aforementioned informed the establishment of the National Youth Service Corps Scheme through the promulgation of decree 24 of 22nd May, 1973 by General Yakubu Gowon's administration.

The National Youth Service Corps Scheme is a year round programme which comprises a four-phase programme made up of mobilization and orientation, primary assignment, community development service and winding-up activities and the passing out parade. Community Development Service of the National Youth Service Corps Scheme is of particular significance within the Nigeria society because it is specifically designed to utilize graduates of the various tertiary institutions who are not more than 30 years of age as at the date of their graduation (NYSC Decree, 1993). These youths are supposed to implement projects that directly benefit the host communities by harnessing their creativity, innovativeness and ingenuity.

Over the years, various governments in Nigeria have embarked on a number of community development programmes, ranging from agricultural to non-agricultural projects in the bid to promote sustainable development. However, these programmes have not produced the desired result as the

country is still tagged developing country with about 53% of her populace domiciled in rural areas (World Bank, 2014). In a related submission, the United Nations Development Programme in its Human Development Report (2015) revealed that Nigeria is one of the poorest countries of the world ranking 152 position with Human Development Index (HDI) of 0.514 and life expectancy at birth of 58.8 years. Advancing reasons for the failure of some of these programmes, Maduagwu (2000) posited that programme failure in Nigeria is due to lack of proper evaluation and identification of the circumstances that are critical to the effectiveness of the programme and its relevance to the need of the masses.

Consequently, an evaluation of the effectiveness of the Community Development Service of the NYSC is required after 41 years of its implementation in the country, coupled with the divergent views trailing the scheme (Chinua, 2011). Therefore, the study becomes significant as the findings will assist development planners to properly harness the potentials of the community development programme of the National Youth Service Corps Scheme in attaining sustainable development in Nigeria. Moreover, the findings of this study will help government in deciding the next line of action on the Community Development Service of the Scheme.

Objectives of the Study

The general objective of this study is to assess the perceived effectiveness of the community development service of the National Youth Service Corps Scheme in host communities in Osun State. The specific objectives include to:

i. assess the availability and level of use of the community development projects of the NYSC in the host communities;

ii examine the benefits derived by the host communities from the community development service of the National Youth Service Corps Scheme;

iii. investigate the constraints toward the effectiveness of the community development service of the National Youth Service Corp Scheme.

Hypotheses of the Study

The following hypotheses stated in the null form were tested in the study:

Ho_1: There is no significant relationship between the personal characteristics of the members of the host communities and their perception of the effectiveness of the CDS projects of the National Youth Service Corps.

Ho_2: There is no significant difference in the respondents' perceived effectiveness of the CDS of the NYSC in the rural and urban host communities.

Theoretical Framework

The theoretical framework for this study is hinged on the concept of community development and programme evaluation and programme effectiveness. Community development refers to the conscious and deliberate attempt aimed at helping communities to recognize their needs and to assume increasing responsibility for solving their problems thereby increasing their capacities to participate fully in the life of a nation (Adisa &Jibowo. 2007). Evaluation on the other hand is the act of ascertaining or judging the value, worth, quality, importance. extent or conditions of projects. It is defined as the systematic application of scientific methods to assess the design, implementation, improvement or outcomes of a project or activity (Rossi & Freeman, 1993). Rockwell & Bennet (2004) has described effectiveness as a function of participation and the level of output. This has also been clarified in the context of community development programme to suggest the extent to which project specific objectives are achieved (IFAD 2012).

The theories of community development as postulated by Sanders (1958), Summers, Daniel Stufflebeam CIPP model and Rockwell & Bennets (TOP) programme evaluation models (2004) were used as guiding models for this study.

METHODOLOGY

The study was conducted in Osun state. Agriculture is the traditional occupation of the people. especially those in the rural communities. In this regard, the state has two major windows of opportunities for community development which are: the Office of Rural and Community Development and the Agency for Community and Social Development Project (CSDP). While the Office of Rural and Community Development focuses on rural infrastructure, community development and finance/administration, the CSDP (a World Bank assisted programme) has the overall goal of providing access to social and natural resource management as well as infrastructural services for Human Development (HD).

The study population comprises of youths and adult (men and women) members of the community where corps members live and work.

A multi stage sampling technique was used for this study. The NYSC administrative zones for Community Development Service operations in the state are four namely: Ilesha, Oshogbo, Ikirun and Ife zones. Fifty percent (2 zones) of the four zones were selected using simple random sampling technique. Osogbo and Ife zones were sampled in this study. From each sampled zone, four communities (two rural and two urban) were purposively selected based on the list of community

development projects executed by the corps members and the location of such projects in the state. This gave a total of eight communities. Rural areas were stratified from the urban using a multifactor concept of population size, educational facilities, percentage of the population engaged in agriculture as their primary source of livelihood, level of infrastructural development and the opinion of the people about their community (Olawoye,1986). Iludun, Oba oke, Ajoda, Omowest (Osogbo), Otunmaye, Adesanmi, Iloro and Ilode (Ife) communities were selected. A total of two hundred and two respondents (including men, women and youths) were then selected across the eight communities through simple random sampling technique.

Instrumentation: Structured and validated pre-tested questionnaires/interview schedule with a reliability correlation coefficient of 0.76 was used to elicit information from the respondents.

Measurement of variables: Selected personal characteristics of the members of the host communities like: age, sex, marital status, educational attainment, occupation and nativity, were ascertained by asking the respondents to indicate as appropriate. Availability and level of use of projects were assessed by asking the respondents to rate twenty community development projects of the NYSC. Availability was assessed on the basis of Yes and No. A score of 1 and 0 was assigned to Yes and No responses respectively. Level of use was assessed on a three point scale of Always in use, occasionally in use and never in use with the score of 3, 2 and 1 respectively. Respondents were also grouped into those that rated project availability and level of use as high and as low through the use of mean of the total score. Scores above the mean (10.40) indicated high project availability and level of use while the mean and all other scores below it denoted low availability and level of use of projects. Benefits derived by the host communities from the community development projects of the National Youth Service Corps was determined by generating twenty possible benefits statements through interaction with the respondents. Respondents were asked to respond to these statements on the basis of Yes and No. A score of 1 and 0 was awarded to yes and no responses. Also, the mean of the total score for the yes and no responses were computed to determine the level of benefits derived by the members of the host communities from each of the CDS project of the NYSC. High level of benefit derived was rated within the range of 11 and 20 while 0-10 signifies low benefit derived. In determining the constraints to the community development projects of the NYSC, sixteen possible constraints statements were generated. Respondents were asked to rate these constraints on a three point scale of serious constraint, not a serious

constraint and not a constraint. A score of 3, 2 and 1 was allotted to serious constraint, not a serious constraint and not a constraint respectively. Weighted mean score was obtained for each statement by multiplying the frequency of each option by its respective score (point) and dividing the summation by the total number of respondents. The weighted mean score was then used to rank the statements in descending order to indicate the extent of severity attached to each by the respondents. The perceived effectiveness of the CDS of the NYSC was measured by generating twenty-four project effectiveness statements (containing both positive and negative) for the members of the host communities (i.e. six project effectiveness statements for each type of project). The respondents were asked to respond to these statements on a five point Likert scale of strongly agree, agree, undecided, disagree and strongly disagree respectively. Scores of 5,4,3,2 and 1 were awarded to positive worded statements and the reverse for the negative worded statements respectively. The possible total score for each type of project in the four types of projects (physical infrastructures, health facilities, educational facilities and public utilities) was 30 indicating high perceived effectiveness while the minimum score was 6 indicating low perceived effectiveness. Respondents with scores above the mean score (18) were adjudged as having high perceived effectiveness of the CDS projects of the NYSC while the respondents with the mean score and scores below the mean score were considered as having low perceived effectiveness of the CDS projects of the NYSC.

The data collected were summarized using descriptive statistic such as, frequency count, percentages and mean while inferential statistics (Chi-square, PPMC, t-test) was used to draw inferences.

RESULTS AND DISCUSSION

Personal characteristics of the respondents

As shown in Table1, larger percentages (48.5%) of the respondents were youths within the age bracket of 18-35 years. This implies that the youths' population in the country is on the increase. This observation support the assertion that the world youths' population is on the increase with virtually all the growth in the developing countries (Population Reference Burea, 2009).The implication is that agricultural extension services should be packaged and disseminated in the manner that can foster adoption and increase productivity. Of all the respondents, 52% were males while 48% were females. More than half (60%) of the respondents were married. This implies that a major proportion of the respondents were people with responsibility and so can be adjudged as having informed

perception of the effectiveness of the CDS of NYSC. Furthermore, most (53.5%) of the respondents in the urban areas had higher educational attainment than those in the rural areas (12.9%). Moreover, most (53%) and (62%) of the respondents were civil servants and natives of the host communities respectively.

Availability and level of use of community development projects in the host communities

Result in Table 2 shows that a total of five CDS projects were identified to be commonly available in the host communities. Provision of chalkboards and books was the project with the highest percentage (95.0%), followed by donation of medical facilities and drugs with 90.1%, equipping of school libraries with 86.1%, donation of computer sets with 84.7% and construction of classrooms 53.5%. The finding above revealed that the CDS did not cover all aspects of human needs, desires and aspirations especially in the rural areas. Corroborating this, Enyi (2014) asserted that there is an imbalance in the living condition of the urban and rural dwellers as most rural areas in Nigeria lack basic infrastructures and are too inadequate for meaningful development in areas where they exist at all. The result in Table 3 further shows that majority of the respondents (51.5%) and (68.3%) rated the availability and level of use of projects as low respectively. This is an indication of the low level of effectiveness of the CDS of the NYSC.

Benefits derived by the host communities from the CDS of the NYSC

Data in Table 4 show that about (50.5%) of the respondents indicated a high level of benefit derived from the CDS of the NYSC while a bit below average (49.5%) signified a low level of benefit derived. This close margin reveals that the value of the CDS of the NYSC is yet to be maximized as people do not derive optimum benefit from the CDS projects.

Constraints militating against the effectiveness of the CDS of the NYSC in the host communities

According to Table 5, five important constraints militating against the effectiveness of the CDS of the NYSC in the host communities were: corruption, inadequate matching up funds, inadequate commitment on the part of the government, idleness of corps members and inadequate support and participation in community development activities by the community members. This finding corroborates the assertion that the high level of corruption in the country is a monster that frustrates any meaningful intervention and decimates their benefits (Ladele 2005). These indicators suggest that development planners and government need to carefully look into the constraints identified as important in order to maximize the effectiveness of the CDS

of the NYSC among the host communities.

Perceived effectiveness of the CDS of the NYSC

Table 6 indicates that majority (83.2%) of the respondents perceived the provision of educational facilities as the most effective project of the CDS of the NYSC, while just above half (54.0%) of the respondents considered the provision of physical infrastructures as the least effective. This implies that the scheme has done tremendously well in the provision of educational facilities but has not deliver in term of physical infrastructure in the study area. The distribution is an indication of the low achievement of the programme in the provision of physical infrastructures which is one of the parameters of development. It shows that the CDS of the NYSC in the study area did not cut across the entire segment of the nation's developmental needs. The low provision of physical infrastructures is an evidence of deep economic doldrums which has been a great obstacle to the pursuit of sustainable socio-economic development of the nation.

Research Hypotheses

Personal characteristics of respondents and effectiveness of CDS projects

Data in table 7 reveal that the respondents' age, sex, religion, marital status, level of education and nativity *($r=0.094$, $x^2=0.064$, $x^2=6.930$, $x^2=11.662$, $x^2=0.07$, $p>0.05$ respectively)* had no significant relationships with the perception of the respondents on the effectiveness of the CDS projects of the NYSC. This points to the fact that the respondents' age, sex, marital status, level of education and nativity were not associated with their perception of the effectiveness of the CDS. However, a significant relationship existed between the occupational status of the people and their perception of the effectiveness of the CDS ($x^2=6.886$. $p\leq0.05$). The implication is that people's occupation may stimulate their perception of the effectiveness of the CDS of the NYSC. People with occupations in which the CDS have performed wonderfully well have the probability of rating its effectiveness as high while those with occupations in which the CDS have not really delivered have the chances of rating it low. According to Rockwell and Bennet (2004) effectiveness is a function of participation and the level of output. This suggests that corps members should execute projects in their fields of specialization with the active participation of community members so as to ensure a balance in project availability and the holistic development of the various sectors.

Difference in perceived effectiveness of CDS between rural and urban residents

The result of the t-test presented on table 8 shows that there was a

significant difference in the perceived effectiveness of the CDS of the NYSC in the rural and urban communities (physical infrastructures t=-7.610; health facilities t=-3.612; educational facilities t=-2.370 and public utilities t=-3.684, $p \leq 0.05$ respectively). This is an indication of the flop of the programme in ensuring even socio-economic development of the Nigerian communities. This difference may be accounted for by the inequality in the number of corps members serving in the urban and rural centres of the study area. Information gathered from the NYSC secretariat in Osun state showed that more corps members are posted to urban areas than the rural areas.

CONCLUSION

Based on the empirical evidence gathered from the study, it could be deduced that the CDS projects of the NYSC was more effective in the aspect of provision of educational facilities. There was insufficient provision of other projects especially physical infrastructures. Also, a low level of availability and use of these projects was observed in the host communities investigated. It is evident that the major constraints militating against the effectiveness of the CDS of the NYSC in the study area include: corruption, inadequate matching up funds, inadequate commitment on the part of the government, idleness of corps members and inadequate support and participation in community development activities by the community members. The study further revealed that a significant difference existed in the perceived effectiveness of the CDS of the NYSC in the rural and urban communities.

It is therefore recommended that:
(1) The policies and principles guiding the CDS of the NYSC must be properly reviewed in order to embrace a holistic approach to community development with special preference for physical infrastructures.

(2) Corps members should be encouraged to embark on CDS projects relating to their areas of specialization and that can really make a lasting impact on the socio-economic life of rural dwellers in the country. The concentration of the corps members on one or two segments of the economy (education and health) should be discouraged.
(3) The constraints identified as militating against the effectiveness of the CDS must be carefully looked into by development planners and government in maximizing the effectiveness of the CDS.

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Table1: Distribution of Respondents' selected personal characteristics (n=202)

Selected Personal Characteristics	Frequency		Percentage	
(i) Age (years)				
18-35	98		48.5	
36-53	73		36.1	
54 and above	31		15.4	
Total	202		100.0	
(ii) Sex				
Male	105		52.0	
Female	97		48.0	
Total	202		100.0	
(iii) Marital status				
Single	65		32.0	
Married	121		60.0	
Divorced	8		4.0	
Widowed	8		4.0	
Total	202		100.0	
(iv) Educational Attainment	Rural F	%	Urban F	%
No formal education	7	(8.5)	2	(1.0)
Primary	22	(10.9)	5	(2.5)
Secondary	23	(11.4)	9	(4.5)
Tertiary	26	(12.9)	108	(53.5)

(v) Occupation		
Civil servant	107	53.0
Self employed	63	31.0
Apprentice Student	24	12.0
Farming	8	4.0
Total	202	100.0
(vi) Nativity		
Native	135	67.0
Non-native	67	33.0
Total	202	100.0

Source: Field Survey, *2014*

Table 2: Distribution of respondents based on projects availability in the host communities

Projects	Frequency	Percentage (%)
Provision of chalkboards and books	192	95.0
Donation of medical facilities and drugs	182	90.1
Equipping School libraries	174	86.1
Donation of Computer sets	171	84.7
Construction of classrooms	108	53.5

Source: Field Survey, *2014*

Table 3: Categorization of the community members based on project availability and level of use of projects

Project Availability				Level of use of projects			
Scores		Frequency	Percentages		Scores	Frequency	Percentage
High	11 – 20	98	48.5	High	41 – 60	64	31.7
Low	0 – 10	104	51.5	Low	20 – 40	138	68.3

n =202 Mean score (10 and 40 respectively)
Source: Field Survey, *2014*

Table 4: Categorization of the community members based on the benefits derived from the community development projects of the NYSC

Benefits derived from projects	Scores	Frequency	Percentage
High	11-20	102	50.5
Low	0-10	100	49.5

Source: Field Survey, *2014* Mean score 10

Table 5: Distribution of the respondents based on the constraints militating against the effectiveness of the CDS of the NYSC

Constraints	Serious constraint		Not a serious constraint		Not a constraint			Mean	Rank
	F	%	F	%	F	%	Total		
Corruption	149	73.8	39	19.3	14	6.9	539	2.69	1st
Inadequate matching up grant	114	56.4	85	42.1	3	1.5	515	2.55	2nd
Inadequate commitment by government	82	40.6	99	49.0	21	10.4	465	2.30	3rd
Idleness of corps members	103	50.9	38	18.8	61	30.2	446	2.21	4th
Inadequate support and participation by community members	66	32.7	101	50.0	35	17.3	435	2.15	5th
Lack of cooperation among the community members	82	40.6	57	28.2	63	31.2	432	2.14	6th
In-adequate technical know-how for project supervision by the community members	72	35.6	77	38.1	53	26.2	423	2.09	7th
Lack of voluntary local community leaders	59	29.2	94	46.5	49	24.3	414	2.05	8th

Lack of interest in project supervision	42	20.8	127	62.9	33	16.3	413	2.04	9th
Implementation of unsolicited projects	54	26.7	97	48.0	51	25.2	407	2.01	10th
Lack of proper consultation with the community members before embarking on project	38	18.8	123	60.9	41	20.3	401	1.98	11th
Inadequate sensitization and orientation	56	27.7	83	41.1	63	31.2	397	1.97	12th
Lack of commitment by the corps member	56	27.7	82	40.6	64	31.7	396	1.96	13th
Improper citing of projects	53	26.2	81	40.1	68	33.7	389	1.93	14th
Duplication of projects by corps members	41	20.3	76	37.6	85	42.1	360	1.78	15th
Problem of ownership of projects after completion	40	19.8	59	29.2	103	51.0	341	1.69	16th

Source: Field Survey, *2014*

Table 6: Distribution of the community members' response on the perceived effectiveness of the CDS projects of the NYSC

Category of projects	Perceived effectiveness	Scores	Frequency	Percentage
Physical infrastructures	High	19-30	93	46.0
	Low	6-18	109	54.0
Health facilities	High	19-30	128	63.4
	Low	6-18	74	36.6
Educational facilities	High	19-30	168	83.2
	Low	6-18	34	16.3
Public utilities	High	19-30	104	51.5
	Low	6-18	98	48.5

Source: Field Survey, *2014*

Table 7: Relationship between the selected personal characteristics of the respondents and their perception of the effectiveness of the CDS of the NYSC

Variable	Chi-square value	Df	P	Decision
Sex	0.064	1	0.834	NS
Marital status	6.930	3	0.074	NS
Level of education	11.662	8	0.167	NS
Status in community	0.07	1	0.981	NS
Occupation	6.886	3	0.009	S*
Variable	R	P		Decision
Age	0.094	0.182		NS

Source: Field Survey, *2014*

Table 8: t-test analysis of respondents' perception of the effectiveness of the CDS of the NYSC in the rural and urban communities

Types of projects	Areas	No of cases	Mean	S.E	Mean diff	t	p-value	Decision
Physical infrastructures	Rural	78	15.8590				.000	S*
	Urban	124	20.6290	.62681	-47701	-7.610		
Health facilities	Rural	78	21.0000				.000	S*
	Urban	124	23.2339	.61841	-2.2338	-3.612		
Educational facilities	Rural	78	21.3590				.019	S*
	Urban	124	22.5645	.50873	-1.20554	-2.370		
Public utilities	Rural	78	19.7308				.000	S*
	Urban	124	21.4919	.47804	-1.76117	-3.684		

n = 202
($p \leq 0.05$)
Source: Field Survey, *2014*

Note: S*= Significant

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INTERNET USE BY AGRICULTURAL STUDENTS FOR ACADEMIC INFORMATION IN PRIVATE AND PUBLIC SECONDARY SCHOOLS IN IBADAN, OYO STATE

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Internet is used by youths for varying purposes of interest. Agricultural students in public schools with special external agricultural interventions are expected to compete favorably with students of private schools thus showing in how well they surf the internet to obtain further agricultural information. This study investigated the influence of internet use on the academic performances of senior students in four secondary schools in Ibadan, Oyo state. Two public secondary schools adopted by Institute of Agricultural Research and Training (IAR&T) for display of research outcomes were purposively selected to compare with two private schools in the same area of the metropolis. The study made use of structured questionnaire to sample 104 students in the four schools selected. Results showed that majority (94.2%) offers agricultural science but only 11.5% acknowledged the subject as their best. Most of the students in private (88.2%) and public (84.9%) had internet enabled phone but only 37.3% of private and 35.8% of public students daily visited the internet. T-test analysis reveals no significant difference in the constraints (t = -1.531, p = 0.129) and the academic performances (t = -1.274, p = 0.206) of the students. The study concluded that exposure to the internet do not have any influence on the academic performances of the students in both private and public schools and therefore recommends that more effort should be put in place to ensure that student's use of internet is focused on academic purposes.

Keywords: *Internet use, Academic performance and Secondary School Students*

INTRODUCTION

There is increasing number of people using the internet across the world and Africa inclusive. According to Debell (2006) the number of internet users in Africa was estimated to be above 140 million in 2012. This number doubled the figure recorded in 2007 and it is expected to double again in another five years. Approximated 38% of

Nigeria's 178 million populace use internet in 2014 (Internet User by county, 2014). The Internet could therefore be referred to as the world's largest and most widely used network. Although the rise in the use of internet has been attributed to growth in Infrastructure and its easy access, it will not be out of place to associate the increasing patronage to various benefits that come with its use.

The internet has the ability to bring the whole world to the user's table to make learning faster and easy. According to Ukpebor and Umwenna (2012), internet has the ability to complement, reinforce and enhance educational process. Internet could also foster close relationship among friends by its numerous networking opportunities. It has made difficult task easier and helped the social welfare of some people. It is an International network of networks that is a collection of hundreds of thousands of private and public networks all.

Youth are more exposed to the internet which could easily be linked to the high technical know-how (Wayan, 2014). Other studies placed more emphasis on the extent to which youths are trapped into the benefits inherent in the internet. One of such is the opinion of Angie-Guan (2009), who submitted that technologies such as computers and the internet have become enmeshed in young people's lives. The high adoption of internet by the youth could therefore be described as a boon and a bane.

However, research has found that the impact of internet access on students' learning is still very low (Ogedegbe, 2012). The reasons for this have been attributed to the relative high cost, the comparative newness of the tool and the possible threat it likely pose on the existing academic structures.. According to Aviv (2015), one major symptom of internet addiction especially among students/ youth is in the neglect of work, school and family obligations.

The importance of youth taking over from aged farmers with bright innovations to make farming venture a business has made the Nigeria's federal ministry of agriculture emphasized the need for secondary school students to take agriculture/animal husbandry as one of the core subjects offered. It is expected that students, especially in the public schools, should embrace this Federal Government agenda and develop more interest or equal their private school counterpart in agricultural knowledge. More so, students that are directly exposed to such opportunities such as first-hand view and practice of research outbreaks in agriculture are not expected to perform less. Part of the time used to surfing the internet should be directed along this new interest, thus using the internet to solve some of their agricultural challenges in schools. This study

investigated the differences and relationships that exist in internet exposure and use among students in two categories of secondary schools in Ibadan Oyo state by answering the following questions. How frequently are the students on internet? What site is mostly visited by the students and how well are the students performing in agriculture as a subject. The study worked with these objectives:

i. Identify sites frequently visited by the students

ii. Determine respondents frequency of visits to the sites identified

iii. Investigate students interest in Agricultural information in the internet

iv. Determine the extent of access to internet by the students and

v. Identify constraints to students internet use

It was also hypothesized that:

i. There is no significant difference in the constraints to internet use by the students in both public and private school.

ii. There is no significant difference in the academic performances of students in public and private school.

iii. There is no significant relationship between internet exposure and academic performance of respondents.

METHODOLOGY

The study area was Ibadan, Oyo state. Institute of Agricultural Research and Training (IAR&T) has two public secondary schools where technologies generated are first tested before dissemination. These two public schools were purposively selected for use in the study. Two private secondary schools were also purposively selected from among the schools in the same vicinity with the public schools selected. This is to ensure that the social exposure for the students in schools selected is the same. The study made use of students that offer agriculture or animal husbandry among the senior students in each of the school. The public schools are United Secondary school, Ijokodo and United Christian Secondary School, Omi Adio while the private secondary schools are Nobel secondary school, Apata and Seed of Life secondary school, Eleyele. The students sampled were 104 from the four schools. Variables such as personal characteristics, frequency of visit to internet, purpose of visit, respondent's academic performances and constraints faced in using the Internet were measured. Quantitative research methodology was employed with the use of open and close ended questionnaire to elicit

information on student access to internet and the sites frequently visited. Both inferential and descriptive statistical tools were used.

RESULTS AND DISCUSSION

Distribution of respondents according to their personal and social economic characteristics

Table 1 reveals almost similar responses in most of the variables measured for both private and public secondary schools. More (52.8%) female students attend public school than male (49.0%). Respondents were of the same age group, only 1.9% of the students were 20 years and above and that was found in the public school. A few (3.8%, 2.0%) were below the teen age in both public and private schools respectively. A few (26.42%, 33.33%) of the respondents in both public and private schools have been using a phone for more than 3 years. Majority (84.9% and 88.2%) in the public and private schools had an internet enabled phone and almost all (94.3%) in public and majority (88.2%) in private school had access to the internet. A little above the average (52.9% and 50.9%) of the students indicated that their frequency of visit to the internet is on weekly basis and majority (81.1% and 86.3%) connects to the internet through their phones in both public and private schools respectively. Agricultural science is offered by majority of the students (98.1% and 90.2%) in both public and private schools. A very low percentage (1.9%) in public school had the subject as their best. The figure is higher (23.5%) in the private school. The students indicated more interest in Mathematics (37.7%) and biology (24.5%). This description implies that the students in public schools are more exposed to the internet devices than their private school counterpart. The public student's lack of interest in agricultural science also suggest the need for more better orientation and restructuring of other external factors that will foster the interest of the students in agriculture.

Primary use of the Internet by Respondents

The student's primary use of the internet in Table 2 reveals that majority uses internet to either complete their school work or to obtain general information. Majority (69.8%) of the public school student visits the internet to obtain general information like national or sport news. Some, (37.7%) other students in public schools complete their school work online, socialize (20.8%) or chat with friends (20.8%). On the other hand, the students mostly in private schools use the internet to obtain general information (43.4%) and to complete school work (31.4%). This result shows that Internet use is into many parts. Debell (2006) corroborate this result that internet and computer use are of interest for different reasons and that the internet is knowledgeable. Also online opinion from

(www.beforeitsnews.com) agrees that communication, education and financial transactions are top among the various areas of frequent use in internet. However, this result further shows that the public schools students have diversified use of the internet than the private students and it corroborates the previous findings in this study that the public school students are more exposed to the internet than students in private school.

Frequency of visit to some internet sites

Table 3 reveals that majority (88.7%, 98.0%) of the public and private school never visited my space. The main internet sites frequently visited by respondents in both public and private schools were: goggle search (39.6%, 33.3%), facebook (24.5%, 21.6%) and 2go (20.8%, 27.5%) respectively. This suggests that the students more frequently use the internet to search for information and to socialize. This agrees with the findings of Fasae and Aladeniyi (2012) that internet usage among students in Nigeria Universities is mainly for entertainment and information. Other sites that were never visited apart from My-space are linkdld (88.7%, 96.1%) and agriculture related sites (94.3%, 96.1%). Also some percentage of the students indicated occasional visit to facebook (56.6%, 37.3%) and Google search (49.1%, 37.3%) The least sites occasionally visited by students in public and private schools were agriculture related sites (5.7%, 3.9%). This result implied that internet use among students is not used for academic performances but mainly for social use.

Weekly visit to the internet for gaining agricultural knowledge

The respondent internet use during the week in Table 4 shows that the students in public (30.2%) and private (35.3%) school visits the internet once or twice during the week to search information for their school agricultural assignments. The students in private school (25.5%) go online to exchange study related materials with agricultural science teachers and friends, while the student in public (21.6%) go online to search study questions in agriculture. Generally, the table reveals that majority of the student's visit to the internet to acquire more agricultural knowledge is mostly not more than twice in a week. This result agrees with Ogedebe (2012) that students visit the internet only 1-2 times during the week.

Distribution of respondents' according to academic performances

The findings in table 5 shows the results obtained by respondents in their last Agriculture exams in both private and public schools. Most of the students interviewed in both public and private (96.2%, 98.0%) schools

respectively indicated an average and above performance in their agricultural science subject. This performance suggests the students' interest in agriculture as a subject which might prompt their surfing the internet to acquire more relevant agricultural information. Only a few (17.0%, 47.1%) students in both public and private viewed their general academic performance as excellence while majority (94.33% and 88.2%) in both public and private acknowledged that internet has helped in their academic pursuit. This finding corroborates the opinion of Joo *et al* (2000), that internet knowledge should be used to improve academic performances

Respondents' internet use to source agricultural materials

Table 6 shows that a higher percentage (73.6%) of the students in public secondary schools had agricultural materials while 52.9% of private secondary school respondents had agricultural materials. Although only 1.9% of the public school respondents got the materials downloaded from the internet, 11.8% of the students with textbooks in private schools got their materials online. The table also reveals that among those that do not have agricultural materials in the schools, 34.0% of those in public schools study directly online while the percentage in private is only 29.4%. This result implies that more emphasis is placed on agricultural science in public schools sampled than in the private schools. The reason for the less priority placed on agriculture in private school is not farfetched, private schools are business oriented and mostly would want to emphasize the core subjects like Mathematics, English Language, Physics, Chemistry and Biology over others like Agriculture which are seen as compulsory.

Constraint faced by respondents in using the internet

The data in Table 7 describes the constraints to internet use by the students. The table reveals that majority (76.5%) of the students in private schools are constrained from using the internet because of the school's authority restriction to using it in school premises. This finding is not consistent with Debell (2006) that schools afford students the opportunity of internet use. Some other private school students (56.9%) are discouraged from surfing the internet because of the poor internet speed often experience. However, above average (52.8%) of the students in public schools do not use the internet because of the high cost involved and poor speed (45.3%). The table also shows that knowledge is not a constraint to internet use by majority of the students especially in public secondary schools where only 9.4% are limited by poor knowledge. It could be inferred from these result that

the private schools exert more disciplinary measures on their students on the use of cell phones which is meant probably to promote academic performances. Indication of poor speed by majority could also imply that improvement in internet speed by service providers would go a long way to encourage more secondary school students into using the internet.

Test of hypothesis

Table 8 and 9 shows the use of t-test to ascertain the differences that exist in constraints to internet use by the students in both public and private school. The result shows no significant difference in the constraints (P = 0.129) faced by students in both category of schools. This suggests that the structure of schools in private and public do not pose a hindrance to the student's use of internet. Also, the non significant difference in the academic performances (p = 0.206) of the school implies that academic performance is not limited to constraints by either attendance of any of either private or public schools. This result is in consonance with the result obtained by Alimi *et al* (2012) that there is no significant difference in academic performances of students in public and private secondary schools in Ondo state.

Relationship between the school's exposure to internet and their academic performance

The table below shows no significant relationship between exposure to internet and the academic performance of the two categories of schools using a Chi square. This result implies that academic activities in the schools are not in any significant way carried out using the internet. This finding contradicts the opinion of Erhan and Okan (2011) that students exposure to Information Communication Technologies at home and school was a strong predictor of their math and science performance in school.

CONCLUSION AND RECOMMENDATIONS

This study reveals that students' visit of internet is mainly for socials purpose. There was no significant relationship between internet exposure and academic performances of the two categories of schools; it also shows no difference in their academic performances. The study thus concludes that

i. Internet exposure do not have direct influence on secondary school students' academic performances and

ii. Public secondary school could have equal academic performance with their private counterpart if they are provided with all necessary support.

The study therefore recommends that government and authorities of both public and private secondary schools

should design more strategies at improving the academic performances of the students. They should also ensure that student's use of the internet is more focused on their academics than on socials.

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Weekly	27 (50.9)	27 (52.9)
Monthly	5 (9.4)	2 (3.9)
Never	2 (3.8)	3 (5.9)
Electronic device use for internet		
Phones	43 (81.1)	44 (86.3)
Laptop	6 (11.3)	6 (11.8)
Desktops	1 (1.9)	1 (2.0)
Others	3 (5.7)	0 (0.0)
Do you offer Agriculture		
Yes	52 (98.1)	46 (90.2)
No	1 (1.9)	5 (9.8)
Student's best subject		
Agriculture	1(1.9)	12 (23.5)
Mathematics	20 (37.7)	9 (17.6)
English	3 (5.7)	8 (15.7)
Biology	13 (24.5)	6 (11.8)
Chemistry	4 (7.5)	1 (2.0)
Physics	6 (11.3)	0 (0.0)
Account	2 (3.8)	4 (7.8)
Others	4 (7.5)	9 (17.6)

Source; field survey 2015 **N: public-53, private-51**

Table 2: Distribution of respondents according to their primary use of internet

Use of Internet	Public	Private
To obtain general information	37 (69.8)	22 (43.1)
To complete school work	20 (37.7)	16 (31.4)
To socialize (face book)	11 (20.8)	7 (13.7)
To check mails	7 (13.2)	9 (17.7)
To chat with friends	11 (20.8)	9 (17.7)
To obtain Agricultural information	6 (11.3)	1 (2.0)
Blogging	3 (5.7)	2 (3.9)
others		

Source; field survey 2015

Table 3: Distribution of respondents according to their frequency of visit to some internet sites

Internet sites	Never		Occasionally		Always
	Public	Private	Public	Private	Public
My space	47 (88.7)	50 (98.0)	5 (9.4)	1 (2.0)	1 (1.9)
WhatsApp	27 (50.9)	43 (84.3)	15 (28.3)	4 (7.8)	11 (20.8)
2go	18 (34.0)	16 (31.4)	24 (45.3)	21 (41.2)	11 (20.8)
Yahoo	35 (66.0)	45 (88.2)	15 (28.3)	4 (7.84)	3 (5.7)
Goggle search	6 (11.3)	15 (29.4)	26 (49.1)	19 (37.3)	21 (39.6)
Twitter page	30 (56.6)	41 (80.4)	17 (32.1)	9 (17.6)	6 (11.3)
Linkdln	47 (88.7)	49 (96.1)	5 (9.4)	2(3.9)	1 (1.9)
Agriculture related sites	50 (94.3)	49 (96.1)	3 (5.7)	2 (3.9)	1 (1.9)
Facebook	10 (18.9)	21(41.2)	30 (56.6)	19 (37.3)	13 (24.5)

Source; field survey 2015

Table 4: Distribution of respondents on their weekly visit to the internet for gaining agricultural knowledge

Uses	Public				Private			
	None	1-2 times	3- 4 times	>4 times	None	1-2 times	3-4 times	>4 times
Search information to do school agric. Assignment	22(41.5)	16(30.2)	7(13.2)	8(15.1)	25(49.0)	18(35.3)	7(13.7)	1(2.0)
Go online to watch agric. educational online programs	37(69.8)	10(18.9)	2(3.8)	4(7.56)	31(60.8)	14(27.5)	5(9.8)	1(2.0)
Go online to exchange study related emails with agric. teachers and friends	41(77.4)	6(11.3)	1 (1.9)	5(9.4)	34(66.7)	13(25.5)	3(5.9)	1(2.0)
Go online to	35(68.	11(21	3(5.9	4(7.8)	33(64.	10(19.	6(11.	2(3.9

search study 6) 6)) 7) 6) 8))
questions in
agric.

Source; field survey 2015

Private
0
4 (7.8)
14 (27.5)
2 (3.9)
17 (33.3)
(2.0)

Table 5; Distribution of respondents according to academic performance

Academic performances with internet	Public	Private
Last examination grade in agriculture		
Poor		
0 Average	2(3.8)	1 (2.0)
Credit	13(24.5)	13 (25.5)
Excellent	15(28.3)	9 (17.7)
11(21.6)	23(43.4)	28 (54.9)
View about Academic performance		
Poor	2(3.8)	0(0.0)
Average	5(9.4)	6(11.8)
Good	17(32.1)	6(11.8)
Very good	20(37.7)	15(29.4)
Excellent	9(17.0)	24(47.1)
Has the use of internet helped in your academic pursuit		
Yes	50 (94.3)	45(88.2)
No	3 (5.7)	6(11.8)

Source; field survey 2015

Table 6: Distribution of respondents according to internet use to source agricultural materials

Items	Public	Private
Do you have agricultural educational materials		
Yes		
No	39(73.6)	27(52.9)
	24(47.1)	14(26.4)
If yes, how do you get them		
From the internet	1(1.9)	6(11.8)
From other means	40(75.5)	23(45.0)
If no, how do you get Agricultural materials to read		
Study directly from the internet	5(9.4)	8(15.7)
From other means	18(34.0)	15(29.4)
I don't need	3(5.7)	3(5.9)

Source; field survey 2015

Table 7: Distribution of respondents according to the constraint faced in using the internet

Constraints	Public	Private
Poor internet speed	24 (45.3)	29 (56.9)
Poor knowledge of its use	5 (9.4)	14 (27.5)
Limited access to enabled dev ices.	15 (28.3)	13 (24.5)
Expensive to use	28 (52.8)	25 (49.0)
Incessant power supply	18 (34.0)	12 (22.6)
Restriction of its use by the school authority	19 (35.8)	39 (76.5)
Inconsistencies in internet packages by service provider	14 (26.4)	15 (29.4)

Source; field survey 2015

Table 8: Differences in constraints to use of internet between school categories

Category of school	N	Mean	SD	t	Df	P	Decision
Public	53	2.32	1.68	-1.531	102	0.129	NS
Private	51	2.88	2.04				

Table 9: Differences in academic performance of school categories

Category of school	N	Mean	SD	t	Df	P	Decision
Public	53	5.91	2.06	-1.274	102	0.206	NS
Private	51	6.43	2.14				

Table 10: Chi square result showing the relationship between the public and private schools

Category of School	N	P	r	Decision
Public	53	0.171	0.222	NS
Private	51	0.900	0.529	NS

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