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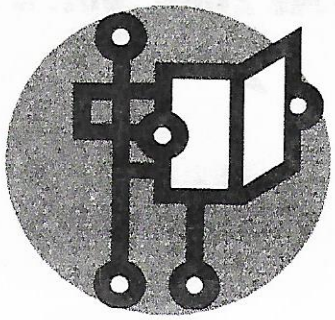

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BRIEF HISTORY OF THE JOURNAL

At the 7th Annual General Meeting of the National Research and Development Network of Children and Youth in Agriculture Programme (CYAP-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.

The under-listed members of the Network were constituted into the Editorial Board.

EDITORIAL BOARD

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CYIAP-Network Publishing

SOCIO-CULTURAL FACTORS AFFECTING GIRL-CHILD EMPOWERMENT IN SELECTED AGRARIAN COMMUNITIES IN NIGERIA

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The study assessed the socio-cultural practices affecting the girl-child. The demographic characteristics of the Nigerian girl-child were also assessed. Multistage sampling technique was employed to select four United Nations Children's Education Fund (UNICEF) assisted States namely Oyo, Enugu, Kaduna and Bauchi States as well as Federal Capital Territory (FCT), Abuja. Three Local Government Areas (LGAs) were selected from each of the four States based on level of food production, while one Area council was selected from Abuja. One community was randomly chosen from the LGAs. Ten each of girls, boys and adults were selected from the 13 communities to give a total of 390 respondents. The UNICEF Girl Child Empowerment scale was adapted for the study using interview schedule with reliability coefficient of 0.97. Data collected were described and analysed using percentages and correlation respectively. Majority (68.20%) of the respondents were between 10-20 years, while 38.72 percent had no formal education. Also 57.95 percent of them were Muslims while 38.46 percent belonged to the Christian faith. The ethnic background of respondents revealed that 38.72 percent of them were Hausa, 24.36 percent were Yoruba while 24.87 percent were Igbo. The practice of female genital mutilation (FGM) was a common practice in Oyo State as indicated by 98.87 percent of the respondents while in Bauchi State; street trading was recorded as prevalent by 97.78 percent of the respondents. Item analysis revealed that early marriage, female genital mutilation, high bride price, female subordination were significantly correlated ($P<0.05$) to girl child level of empowerment in Oyo ($r=-0.24$), Enugu ($r=-0.26$), Kaduna ($r=-0.28$), FCT ($r=-0.56$).Regression analysis showed that early marriage, teenage pregnancy and violence against girl-child militate against girl-child empowerment. Removal of the socio-cultural constraints will further empower the girl-child in her ability to participate in development related activities in the near future. The perception of their roles and responsibilities by the society as helpers should be changed to enable them contribute positively to developmental processes.

Key words: Girl-child, Empowerment, Agrarian Community.

INTRODUCTION

Child empowerment involves giving disadvantaged group of children the ability to improve their situation (Tomorrow, 2000). This constitutes a major programme of government, Non-Governmental Organizations (NGOs) and the concerned societies all over the world. Smith (1996) posited that empowerment is the act of encouraging people to become more involved in the decisions and activities that affect their lives. This means providing people with the opportunity to show that they can generate good ideas and that they have the skills to put these ideas into practice.

Socio-cultural factors refer to a range of dynamic forces that originate within a social system which work against an individual's ranking or position in a society (Onwueme and Ugbor (1994). These include practices such as female genital mutilation, widowhood rites, male preference etc. These factors led to call for women to develop themselves and struggle for the end to those cultural and social norms that discriminate against them. Cultural factors are therefore reflected in the patterns of behaviour, beliefs, preferences, customs and traditions, which account for gender-based differences within a society. Aderinto (1991) submitted that the socio-cultural environment in which the girl-child operates does not motivate her to attain her full potentials. Girls are often seen as future wives and mothers and parental attitudes towards them are largely influenced by these socio-cultural factors. All these practices could have both positive and negative impact on their well-being (Ogidi, 1997).

Research has shown that women possess great potentials to help in increasing agricultural productivity and subsequently economic development of the nation like men, but they are often neglected and not empowered. Regardless of the active involvement of women in farming activities, they are not equally represented when it comes to decision making, inheritance and access to productive resources.

Girl-child empowerment is now a widely acceptable theoretical

concern worldwide (Ogidi, 2000). It has been severally reported that the farming population is now ageing because males are leaving the profession and the females are not empowered through access to resources such as education, credit and landed properties and so females usually do not benefit from agricultural development projects (Olawoye, 2002; Monica and Anjana, 1996). It is therefore necessary to ensure enhancement of future farming population through empowerment. This will be possible if the socio-cultural factors that serve as impediments are understood and eliminated. This study therefore examines the socio-cultural factors affecting the Nigerian girl-child and her level of empowerment.

METHODOLOGY

This study was carried out in Nigeria. The country was divided into 4 zones representing zones with UNICEF zonal offices and the Federal Capital Teritory (FCT). Zone A – South east zone covers Abia, Akwa Ibom, Anambra, Bayelsa, Benue, Cross River, Ebonyi, Enugu, Imo and River state. Zone B – South west covers Delta, Edo, Ekiti, Lagos, Ondo, Ogun, Osun and Oyo. Zone C – North west consist of FCT Abuja, Kaduna, Katsina, Kebbi, Kogi, Kwara, Niger, Sokoto, Zamfara while Zone D – North east consists of Adamawa, Bauchi, Borno, Gombe, Jigawa, Kano, Nassarawa, Plateau, Taraba and Yobe states.

Purposive sampling technique was used to select farm families who are located in the food basket zones of the selected states in Nigeria using extracts from Udo *et al.* (1993). Communities in three LGAs out of the existing 23 LGAs of Kaduna State namely Igabi, Giwa and Birnin Gwari were interviewed. In Bauchi State, three agricultural communities in three Local Government Areas out of the existing 23 LGAs namely Misau, Toro and Bauchi were sampled. In Oyo state, samples were drawn from three (3) LGAs; Ibarapa, Oyo Central, Ifedapo out of the existing 33 LGAs. FCT has 6 LGAs out of which one (1) was sampled namely Gwagwalada. Enugu State has 19 LGAs out of which 3 were sampled (Enugu,

Nsukka and Orji river). Ten (10) each of boys, girls and adults were selected from each of the LGAs using household listing. This involves selecting the nth subject or item from serially listed population. This means, selecting every 5th or 10th household after the first, depending on the number of households in a community. In each of the households, the researchers identified a boy, girl and adult for sampling through systematic approach. At least 10% of the LGAs in each of the States was purposively selected based on the study of Udo *et al.*, (1993) on the food basket zones in Nigeria. In all, a total of one hundred and thirty (130) boys, girls and adults respondents were sampled. Two In-depth Interviews (IDIs) were conducted in each of the communities to give a total of 26 IDIs. Opinions of leaders and elites were sought on the social and cultural factors operating in the communities vis-à-vis the empowerment of the girl-child in the various communities

RESULTS AND DISCUSSION

The result shows that majority (68.20%) of the respondents were between 10 and 20 years, while 18.21 percent are between 21-30 years. About 6 percent of the respondents are over 50 years of age. The mean age of the respondents was 23.08 years. This means that majority of the respondents were young and still very active.

About 38.72 percent of the respondents had no formal education, while 52 percent attended primary school. Only 2.82 percent completed secondary school while 2.31 percent had tertiary education. This indicates that most of the respondents have one form of formal education or the other. Thus majority of the respondents are literate. About 57.95 percent of the respondents were Muslims while 38.46 percent belong to the Christian faith. This indicates that the respondents were highly religious and thus their religious creed and dogma could have influenced girl child empowerment. While 61.54 percent of the respondents were single, 6.92 percent were separated/widowed/ divorced just as 28.72 percent were married. This could be an

indication that most of the respondents were young and still under the care of their parents. The age distribution of respondents may thus be an important factor.

The result further shows that the ethnic background of respondents. While about 38.72 percent of the respondents were Hausa 24.36 and 24.87 while percent were Yorubas and Igbos, respectively. Other tribes identified by the study were Fulanis, Udomas, Egbiras, Jarawa, Kufai, Ribina, Ilimuro, Gusawa, Sanga, Buli and Gyerawa which accounted for 6.67 percent of the respondents. Hausas form a larger proportion due to the fact that of the 4 states, 2 states in the North – Kaduna and Bauchi; as well as the Federal Capital Territory (FCT) were included in the study.

Empowerment and Prevalence of socio-cultural practices

The results also show that the practice of female genital mutilation (FGM) is a common practice in Oyo State as indicated by 98.87 percent of the respondents, followed by street trading (97.7%) and widowhood rites (93.3%) while only 7.78 percent reported the practice of ritual for first menstruation as being predominant in the study area. This means that despite all the efforts of government and non-governmental agencies at eradicating FGM, this practice was found to be prevalent in this area.

More so, in Enugu State, over 90 percent of respondents reported that street trading, widowhood rites and high bride price were prevalent practices in the State while only 42 percent of respondents believed that low investment in female education is in practice. This is an indication that street trading, widowhood rites and high bride price payment are serious problems, while low investment in female education is considered the least problem in the state. Also in Kaduna State, the practice of widowhood rites was indicated as being prevalent

as cited by 97.78 percent of respondents followed by high bride price (96.7%), while only 14.44 percent of the respondents believe that ritual for first menstruation is a common practice within the state. Ritual for first menstruation is thus not perceived to be common in the state. Over 96.7 percent perceived tribal mark as prevalent while only 27 percent of perceived ritual for first menstruation as being in existence. Thus, street trading is a serious problem while ritual for first menstruation is not considered as a serious problem.

In FCT, all (100%) the respondents perceived early marriage, teenage pregnancy, male preference culture, widowhood rites, control of resources, sexual exploitation, discrimination in food allocation, low investment in female education, street trading and female seclusion as being in place within their society. Only 30 percent of the respondents refereed to the practice of FGM as still in practice. This could be due to the cosmopolitan and the multi-ethnic nature of this territory.

Hypothesis testing

Ho. There is no significant relationship between the Socio-cultural practices affecting the girl child and her level of empowerment. Data in Table 1 show that in Oyo State, of the socio-cultural practices, the level of empowerment of the girl-child had significant relationship with male preference culture (r=-0.30), early marriage (r=-0.24) as well as female seclusion (r=-0.31). In Kaduna State, the level of girl-child empowerment had a significant relationship with high bride price (r=-0.28) and sexual exploitation (r=-0.22).

Focus Group Discussion

In reaction to the issue of high bride price, a discussant revealed that:

"high bride price is a major practice responsible for the high incidence of unmarried single ladies within the communities".

A 56 year old male elite opined that culturally, confinement serves the purpose of confirming that the woman is not carrying pregnancy for the dead husband. Meanwhile, the practice of ritual

for first menstruation was ascribed as not in place, judging by the results obtained during the IDI. Also the on-set of menstruation signals maturity for marriage. In reaction to the issue of rituals for first menstruation, a female discussant observed that menstruation is believed to be a sign of maturity and transformation to adulthood.

Implications for girl-child empowerment

The relationship between the socio-cultural factors affecting girl-child empowerment and her level of empowerment indicates that the more the males are preferred, the less empowered are the girls. This shows that preference of the male child leads to the neglect of the girls, which affect their empowerment. Also, the more the girls are exposed to early marriage, the less empowered they become. Such females may end up not having completed their education or having learnt a craft or trade, thus making them liabilities. Also, the more the possibility of female seclusion, the less empowered are the girls. This practice has the potential of excluding them from civilization.

It was found that socio-cultural practices such as female genital mutilation ranks first, street trading – 2nd, widowhood rites – 3rd, female subordination – 4th in Oyo State. In Enugu, state, widowhood rites and street trading rank first, while control of resources ranks 3rd. In Kaduna, widowhood rites rank first, male preference 2nd, respectively. In Bauchi state, street trading and tribal marks rank 1st and second while in FCT, early marriage, teenage pregnancy, male preference, widowhood rites, control of resources, all rank 1st. All these were considered to be the major contributors to the socio-cultural practices, which impinge on the girl-child empowerment.

CONCLUSION AND RECOMMENDATIONS

Diverse socio-cultural practices affect girls in the various agrarian communities and in varied degree. Focusing the eradication of major socio-cultural practices from the various communities would further empower the girl-child.

The sex role of assigning roles and responsibilities need to be changed. The socialization process needs to be modified to eradicate the gender division of labour. Such policies would assist in sharpening the perception of males and females towards the entrenched subjugation of women in the society. Women's ability to fulfill their roles as food producers can be enhanced by improving their access to various resources and through a better socialization process.

Policy makers should take keen interest in assessing the characteristics of the society in which a change would be effected. Taking consideration of norms, values, cultures and traditions that are prevalent within such communities would assist in reaching the desired result. The government needs to ensure that employment offers equal opportunities in terms of hiring, training and work opportunities for both men and women. This will contribute positively to the advancement of the agricultural sector and other sectors of the economy.

Acknowledgement
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Table 1: Relationship Between Prevailing Socio-Cultural Practices Affecting Girl-Child and Her Level Of Empowerment

	OYO		ENUGU		KADUNA		BAUCHI		FCT	
	r	p	r	P	r	p	r	p	r	p
Female Genital Mutilation	-0.12	0.27	-0.26	0.01*	-0.11	0.31	-0.20	0.06	0.23	0.22
Nutritional taboo	-0.08	0.44	-0.24	0.02*	0.01	0.89	0.02	0.86	0.25	0.17
Seclusion (labour)	0.02	0.82	0.23	0.03*	-0.08	0.46	-0.11	0.31	0.08	0.66
Early marriage	-0.24	0.02*	0.04	0.66	-0.17	0.11	0.11	0.29	-0.44	0.02*
Teenage Pregnancy	-0.05	0.65	-0.35	0.00*	0.02	0.83	0.20	0.06	0.20	0.28
Shyness	-0.02	0.83	0.04	0.70	0.09	0.41	-0.14	0.20	0.31	0.09
Male preference	-0.30	0.00*	0.17	0.11	-0.00	1.00	-0.01	0.90	0.31	0.10
Widowhood rites	-0.06	0.57	-0.23	0.02*	0.17	0.11	0.11	0.32	-0.05	0.798
High bride price	-0.08	0.44	0.24	0.02*	-0.28	0.01*	0.12	0.30	0.10	0.58
Initial ritual for first menstruation	-0.05	0.63	0.05	0.63	0.09	0.39	-0.12	0.25	0.12	0.52
Kinship pattern (inheritance)	-0.02	0.88	-0.31	0.00*	0.12	0.25	0.08	0.44	-0.26	0.17
Control of resources	-0.03	0.76	-0.42	<0.00*	0.03	0.77	0.20	0.06	-0.31	0.09
Tribal mark	0.05	0.63	-0.05	0.61	0.19	0.07	-0.16	0.06	0.29	0.12
Sexual exploitation	0.11	0.29	-0.07	0.00*	-0.22	0.04*	0.02	0.44	0.12	0.54
Discrimination in food allocation	-0.01	0.88	0.04	0.67	0.07	0.52	0.05	0.65	0.15	0.43
Low investment in female education	-0.07	0.48	0.07	0.52	0.06	0.60	-0.03	0.79	0.17	0.36
Violence against girl child	-0.02	0.79	-0.34	0.00*	0.07	0.50	-0.03	0.74	0.30	0.10
Street trading	-0.10	0.37	-0.34	0.00*	0.04	0.73	0.01	0.95	0.19	0.32
Female seclusion	-0.31	0.00*	-0.34	0.00*	-0.16	0.12	-0.07	0.51	-0.13	0.48
Female subordination	-.012	0.28	-0.48	<0.00*	-0.02	0.86	0.01	0.90	-0.56	0.00*

= Correlation coefficient
p = level of significance
* = Significant at 0.05

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CHILD FARM LABOUR PARTICIPATION INTENSITY: IMPLICATION FOR EDUCATIONAL PERFORMANCE OF RURAL CHILDREN IN OSUN STATE, NIGERIA

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Distribution and profile of poverty in Nigeria showed that the propensity of a household falling below poverty is higher in the rural areas and that rural households are of low literacy level which leads to low income. This study therefore sets out to examine the level of intensity of farm labour participation on academic performance of children from rural farming households. A multi-stage random sampling technique was employed in the selection of the respondents and information was elicited from the respondents through the use of a structured questionnaire and on their socio-economic characteristics, types of farm labour activity engaged in and number of hours put into it, amount realized from farm labour and state of infrastructure in the school. Secondary data were also obtained to know the academic performance of the students from the schools principal. The study find out that about 94.2% of the children in the study area are involved in farm labour. The result further shows that 51.3% of the respondents that have high level of participation in farm work have poor academic performance. The factors that determine the level of participation in farm labour are age of household head, mothers' income, state of infrastructure in the school, educational status of household head and children's wage rate for farming activity. The study therefore concludes that there is a prompt need to encourage children in the rural areas to put in more time on their education, household heads should be re-oriented on the essence of education, spouses of the household heads should be encouraged to engage in more income generating activities to support the education of their children and finally, the infrastructures in the schools should be rehabilitated to make the environment conducive for the students so as to improve their academic performance.

Key Words: *Academic performance, child labour and participation intensity*

INTRODUCTION

"Child labour", generally speaking, is work for children that harms them or exploits them in some ways (physically, mentally, morally, or by blocking access to education). The International Labour Organization (ILO, 2002), classified a child as a worker or as been economically active if the child is recommended for that work or if the output of this work

is being destined for the market. Hence, a child is considered to be working whether he/she is being paid for the work or is working for the upkeep of his/her family and is unpaid for work destined for the market.

According to International Labour Organization (ILO, 2002), of all the regions, Sub-Saharan Africa has the highest child labour rate. The number of working children between the ages of 5 and 14 in developing countries is estimated at 250 million, of whom some 120 million work full-time (ILO 1996). Many millions of these children work in occupations and industries which are plainly dangerous, hazardous and exploitative. For instance, ILO statistical surveys in 20 countries reveal that nearly 70 per cent of the working children face serious hazards, such as cuts, fractures, loss of body parts, crushing injuries, burns, skin diseases, sight or hearing loss, and respiratory illness. The household surveys also reveal that 80 per cent of the children work 7 days a week (ILO 1997b). Two-thirds of the working children of developing countries live in the rural areas and nearly three quarters of them are engaged in agriculture and related activities (ILO 1997a, 1997b). Seventy per cent of the working children are unpaid workers, the proportion being as high as 81 per cent in rural areas (ILO, 1997b).

Demand for child labour plays a critical role in determining the involvement of children in hazardous work. Addressing this thorny issue of child labour is vital to the development of many of African's youngest citizens, who will determine the future of Sub-Saharan Africa; the child labour issue will be central in the fight against poverty.

There are several human development issues associated with this hidden or invisible form of child labour that warrant scrutiny- specifically the hazards posed to children when working in certain tasks and most importantly the compromising of this future generation especially through negative effects on children's schooling. African rural societies do not consider child labour as a delinquent

activity, and that "productive activity of a child living in a rural and traditional environment is a means of social integration and should be likened to "teaches the child survival skills" (Bekombo, 1981; Grootaert and Kanbur, 1995). This view does not see child labour in traditional environment as a problem per se, but as a form of "on-the-job" training.

On the other hand, childhood is probably the best time for acquiring knowledge from the formal education system if we consider schooling as an investment in human capital, which yields a return in the labour market. In that sense, it is natural to see schooling as the preferred alternative to child labour (Grootaert, 1998).

An understanding of the relationship that exists between child labour participation intensity and their academic performance will suggest needed interventions to improve the state of the education in the rural areas. Therefore, understanding the joint participation behaviour of the household in their decision of whether to send a child to school and/or to work could help to formulate more appropriate education and labour policies to remove obstacles to one of the most important long term objectives of any developing economy. The training of tomorrow human resources in order to enhance their human capital development and improve their welfare status.

This study therefore sets out to examine the various types of farming activities and the numbers of hours put into it by the children; compare farm labour participation intensity and pupils academic performance; examine their reasons for participation in farm labour and; analyze the factors that determines their level of participation in farm labour

RESEARCH METHODOLOGY

The study was carried out in Osun State, Nigeria. Osun state came into existence on August 27th, 1991 as a result of the bifurcation of the former Oyo State by the Federal Military Government with its headquarters in Osogbo. The

State lies in the southwest of the Niger valley in the savannah and rainforest zones of the country. The study area lies between latitude 700° and 900° N and Longitude 2.75° and 6.75E of the Greenwhich meridian. It covers a total land area of approximately 37, 680 Km^2 the state is bounded in the south by Ogun State, in the north by Kwara State in the east by Ondo State and Ekiti State and west by Oyo State.

A multistage random sampling technique was employed in the selection of the respondents. The first stage was the selection of two Local Government Areas (Iwo and Irewole Local Government), the second stage was the selection of two villages from the two Local Government Areas, the third stage was the selection of a secondary school from each of the villages and the fourth stage was the random selection of 30 pupils in J. S. S. 1 from each of the secondary school.

Socio-economic characteristics of the respondents were analyzed using descriptive statistics (frequency and percentages) and an Ordinary Least Square (OLS) Regression Model was used to identify the determinants of factors that influence level of participation intensity among children in rural farming households.

An Ordinary Least Square Regression Model was used to determine the factors that influence level of participation among children from rural households, which was represented thus:

Ypt = A+ AGEC+ SEXC+ POSHH+HHTYPE+AGEHH+ EDUHH + WAGECL + SINFRA

Ypt = participation in farm labour (Number of hours worked in a month)

AGEC = Age of Child (Actual years)

SEXC = Sex of Child (1 = Male, 0 = Female)

POSHH = Position in the household (1 = first born, 0 = other position)

HHTYPE = Household type (1 = Monogamous 0 = Polygamous)

AGEHH = Age of household head (actual years)

EDUHH = Educational status of household head (1 = None, 2 = Primary, 3 = Secondary, 4 = Tertiary).
WAGECL = average wage of child labour in the study area.

RESULT AND DISCUSSION

The socioeconomic characteristics of the children in the farming households that were analyzed include age of child and that of the household head, educational status of the household head, Gender of the children, position in the household, income of household head, type of home the children are from.

The result revealed that a vast number of the children (72.5%) from the rural farming area who are in J. S. S. 1 are greater than 13 years old. This might be due to the fact that some of the pupils started schooling late or due to their low academic performance might have repeated a class in their primary school thus retarding their academic progress. In addition, the survey revealed that male children have a higher enrolment (64.2%) into secondary schools, compared to that of the girls having 35.8 percent in J.S.S.1 compared to their male counterpart which was quite low. This shows that the orientation of parents in the rural areas towards preference for sending their male children to schools in the rural areas is yet to be totally reoriented that both male and female children should be given equal right to education.

Another interesting finding was that most of the respondents (72.5%) were from a relatively large household. The study also showed that few (13.3%) of the respondents from very large households was enrolled in secondary schools because households have to share the resources available to the households amongst the whole households. They are therefore compelled to work on the farm if they must go to school or rural households are now adopting family planning method to reduce their household size.

Most of the respondents (74.2%) interviewed were either the first or the last child in their family. This might be due to the mentality of rural households to try and

educate their first child who are seen as their heir thus increasing their chances of going to school. In addition most households believe that if they can educate their first child, they will be able to cater for their younger ones when they became financially independent. Also the last children of families are at advantage position of being educated since the dependency ratio in such households have reduced and have elderly ones who are most likely to be working, it therefore, become easier for them to get financial assistance and go to school.

The study also revealed that 57.5% of the respondents are from households where the heads are out growing their productivity age thus reducing their income generating activities and this tends to encourage the children to go into farm labour in order to augment the income of the head and to contribute to their own academic pursuit.

The results further revealed that majority of the respondent (59.2%) are from households where the heads do not have any form of formal education. This might have influence on their level of commitment placed on the educational status/performance of their wards thus enforcing them to go and participate in farm labour.

In addition majority of the head of the households of the children have an average monthly income that is between N5,000 – N10,000 which could be one of the reasons why the children have to engage in farm labour in order to support the welfare of their households and also to support the funding of their education.

Further more, a greater percentage of the children are from polygamous homes characterized by high household size, continuous rift, misunderstanding, lack of commitment to education of their children due to financial incapability which consequently forced the children to go and work to give themselves a future by partly sponsoring their education. Also, some of the respondents (24.2%) are from broken homes and they have to

work on the farm in order to augment the income of their single parent in order to fend for themselves and continue with their education.

Type of Farming activities involved in by children

The study revealed that a great majority of the respondents (94.2%) are engaged in farm work though the type of activities they are involved in varies and the number of hours put into it. Some of the respondents (20.4%) are involved more in weeding, planting and harvesting, while only 4.1 percent of the respondents are involved only in the making of ridges. This might be due to the fact that making of ridges/beds is more labourious and also time demanding on the part of the children coupled with the fact that they are too young for it and have their education to face

Participation Intensity of Children in Farm Labour

Based on the number of hours that the children put into farm labour, they are classified into low participation and high participation intensity. For children that work for more than 40 hours in a month they are regarded as high level participants in farm work while those that puts in not more than 40 hours into farm labour are regarded as low participants in farm labour. The result shows that majority of the respondents (69%) are participating in farm labour at a high level which might be affecting the time that they are putting into their education which might have effect on their academic performance.

Farm Labour Participation Intensity and Academic Performance

In measuring the academic performance, the scores of the respondents in their common entrance examination was used. A student with a score of 70 and above are regarded as having high performance in their academics, those between 50 and 69 as having average academic performance and those scoring below 50 as having poor performance in their academics.

The relationship between the academic performance of children

and their level of participation intensity in farm work was examined. The analysis shows that there is a high level of relationship between the level of farm labour participation and their academic performance. About 57.1% of the respondents that are not involved in any form of farm labour have high academic performance while 14.3% are average in their academic performance and 28.6% are poor in their academic performance. For the respondents that are participating in farm labour at a low intensity, 62.9% of them have average academic performance while 51.3% of the respondents that are participating in farm labour at a higher intensity level have poor performance in their academics. This might be as a result of the numbers of hours put into farm labour rather than concentrating on their studies.

Reasons for Participating in Child Farm Labour

The results showed that a vast number of the children (59.2%) are involved in farm labour in order to argument their household income. This shows that majority of the children that works on the farm do not have the income earned spent on their education in order to enhance their educational advancement. The income earned is withdrawn from the children and it is spent in maintaining the household in order to improve their standard of living and enhance their welfare status. About 17.5 percent of the respondents are participating in farm labour to cater for themselves while only 15 percent of the respondents are involved in farm labour for their educational advancement.

Factors Determining the Level of participating Intensity

In order to determine the factors that influence the level of participation intensity, an Ordinary Least Square Regression analysis was fitted. The result showed that 87 percent of the variations in the level of the participation in farm labour are explained by the age of the household head and their educational status, mother's income, average wage rate for children in the study area, state of infrastructure and type of home.

The result further revealed that negatively influence participation intensity in farm work are educational status of household head, state of infrastructure in the school, income of mother, type of home. A percentage increase in age of the household head and community average child wage per hour will increase the participation intensity of children in farm labour by 21.63 percent and 84.13 percent respectively while a percentage increase in the educational status of the household head, mothers income, state of infrastructure in the school, likelihood of the children to come from monogamous home will reduce the level of participation intensity in farm labour by 13.6 percent, 20.6 percent, 11.6 percent and 94.2 percent, respectively.

CONCLUSION AND RECOMMENDATION

This study examined farm labour participation intensity among children in rural farming households in Osun State. It was revealed that majority of the respondents participated in farming labour activities. The result shows that the respondents who are J.S.S. 1 students are mostly male, older than 13 years, majority are from a relatively large household size, mostly from polygamous home, the head of their households are more than 50 years of age with no formal education and the income of the head of their households are between N5,000 – N10,000. The study further reveals that most of the respondents (94.2%) are participating in farm labour and majority of the participants are into farm labour at a high level of intensity.

Furthermore, most of the respondents that are into agriculture at high level of participation have low performance in their academics while majority of those who are not into farm labour have high academic performance.

The study therefore concludes that a high level of participation intensity of children in farm labour has a negative influence on their educational performance. It then recommends the following in order to improve the academic

performance of children from rural farming households.

1. There is the need to re-orientate household heads in rural areas on the importance of education on the future of their children through investing more on the education of their wards.
2. Household heads should spend more of their income on the education of their children.
3. Spouses of household heads should be encouraged to engage in income generating activities in order to argument the income of their households to be able to invest on the education of their wards which will help to reduce the intensity of child farm labour
4. Schools environment and infrastructure need to be rehabilitated because friendly school environment will improve the enthusiasm of the children to go to school.

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Table1: Socio-economic characteristics

Socio-economic characteristics	Frequency	Percentage
Age		
< 13 years	33	27.5
> 13 years	87	72.5
Gender		
Male	77	64.2
Female	43	35.8
Household size		
> 6	17	14.2
6-10	87	72.5
> 10	16	13.3
Position in the Household		
First/last	89	74.2
Others	31	25.8
Age of Household head		
< 50 years	51	42.5
> 50 years	69	57.5
Educational status of household head		
No formal education	71	59.2
Primary	17	14.2
Secondary	22	18.3
Tertiary	10	8.3
Income from household head		
< 5000	31	25.8
5000-10,000	69	57.5
> 10,000	20	16.6
Type of home		
Monogamous	17	14.2
Polygamous	69	61.6
Broken Home	24	24.2

Source: Field Survey, 2007

Table 2: Type of farming activities involved in by children

Farming activities	No of children involved	Ave no of hours per month
Weeding only	9	40
Planting only	10	38
Harvesting only	11	31
Land clearing only	7	58
Making of ridges only	5	37
Planting and land clearing	10	69
Weeding and harvesting	2	63
Weeding and making ridges	6	51
Land clearing and making of ridges		
Weeding, planting and harvesting	9	59
Land clearing, making of ridges and harvesting	23	81
	11	64

Source: Field survey, 2007

Table3: Participation intensity of children in farming activities.

Participation intensity	Frequency	Percentage
Low participation intensity	35	31
High participation intensity	78	69

Source: Field survey, 2007

Table 4: Farm Labour participation and academic Performance

Participation intensity	Academic performance		
	High	Average	Poor
None participants	4(57.1)	1(14.3)	2(28.6)
Low level participant	5(14.3)	22(62.9)	8(22.9)
High level participant	15(19.2)	23(29.5)	40(51.3)

Source: Field survey 2007

Table 5: Reason for Participating in Child Farm Labour

Reason for involvement in farm labour	Frequency	Percentage
To augment household income	71	59.2
To cater for themselves	21	17.5
To support their education	18	15
As a hobby	10	8.3

Source: Field survey, 2007

Table 6: Factors Determining the Level of participating Intensity

Variables	Coefficient	Standard Error	P>/Z/
Constant	0.0137	2.2782	0.0368
Age of child	0.2433	0.6589	0.5194
Sex of child	0.0427	1.1644	0.2613
Position in the household	1.0412	1.0902	0.0073
Age of household head	0.2163	4.6600	
Educational status of HH head	0.1362	6.8939	0.0003***
	0.2064	1.7837	
Mothers income	0.1163	2.1801	0.0000***
State of infrastructure in the school	0.8413	0.2859	0.0934**
	0.9421	0.4322	0.0445*
Average wage rate of children			2.943*
Type of home			2.189**
R^2			
F- statistics 59.78			
N 120			

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ASSESSMENT OF RURAL CHILDREN'S KNOWLEDGE OF HAZARDS ASSOCIATED WITH FARMING IN OYO STATE, NIGERIA: TOWARDS TRAINING FOR SAFE FARMING.

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Children in Rural areas of Nigeria are known to be active participants in farming. Their involvement in farming had been described as a socialization process and eventual training as future farmers. The study was designed to assess rural children's knowledge of hazards associated with farming and identify the determinants of the knowledge level. In addition, the safety gears available and used by them were identified. Primary data were collected from two hundred and twenty nine (229) children aged between six and eighteen years. A multistage sampling procedure was employed to cover the four geopolitical zones in the state. Predominantly rural local government areas were selected for the study. Pre-tested interview schedules were used to collect data on respondents' personal and socio-economic characteristics. The data were subjected to statistical analyses such as frequency counts, percentages and Pearson Product Moment Correlation. Results from the study showed that majority (87.55%) of rural children were aware of farm hazards such as cuts from tools, insect bites and eye irritation from dust. Majority (67.47%) of the respondents were rated as having moderate level of Knowledge of Hazards Associated with Farming (KHAF). Among the variables that significantly correlate with scores in KHAF at P<0.05 level of significance are purpose of farming (r=0.49), farm size (r=0.44), sale of labour (r=0.37), schooling status (r=0.36) and ownership of personal farm (r=0.33) among others. The study identified the need to train children on hazards and health related problems associated with farming. Children should also be trained on the use of safety gears in order to promote safe farming since they were naturally positioned to take up the required food producer status of the future.

Key Words: Hazard, Rural Children, Knowledge, Training, Farming.

INTRODUCTION

In most regions of the developing world especially in sub-Saharan Africa, millions of rural dwellers work as farmers, farm workers and or natural resource exploiters. The agricultural sector therefore dominates the economies of most of the rural areas of the countries. In Nigeria, this situation informed the direction of some rural development activities towards agriculture and natural resources sectors by the various past governments. In addition, despite the discovery of crude oil in Nigeria, dominant role of agriculture in rural economy had

not changed substantially. However, a considerable size of rural dwellers abandoned agriculture in search of wage labour in urban centers. This was the situation until 1986 when Structural Adjustment Programme (SAP) was introduced in Nigeria. The aftermath of SAP included down sizing and closure of some companies. Some migrants who were engaged in the urban centers where these companies were located lost their jobs. Significant proportions returned to the rural areas and were engaged in farming. It has been estimated that about 69.4 percent of Nigerian people reside in the rural areas while the primary occupation remains farming and farm related activities (Abumere *et al.*, 2002). Children were also involved in those farming and the related activities (Jibowo, 1992; Obinne et al., 2002; Ekong, 2003).

Consequently, Farinde (1999) opined that children are naturally endowed to take over farm responsibilities from adult men and women who are the present farmers. With this futuristic role of taking over farm responsibilities, for continuity which nature had given the rural children, there is the need to understand the activities of rural children within the farm setting. Although authors did not agree on the best description accorded the participation of children in farming, some classified it as child labour (Olawale and Solola, 1999) while others considered it a socialization process (Torimiro and Lawal, 1999). While the disagreement on the best description of children's participation in farming is out of scope of this study, the fact that children participate in farming was the major thrust.

Agriculture had been described as one of the most hazardous sectors in many countries (Idu *et al.*, 2001, Obinne *et al.*2001, Obasi *et al.* 2001). The International Labour Organization (ILO) estimated 170,000 causalities among agricultural workers each year, a high number of the world's 1.3 billion agricultural worker suffer serious injuries or occupational diseases (ILO, 1996). While occupational

mortality rates in other dangerous occupations such as mining and construction are declining, through the 1990s, those of agriculture have continued to rise both in the industrialized and developing countries (ILO, 1996). The increased risk of occupational diseases and injuries was attributed to carelessness in the use of pesticides and machines in recent years. According to ILO (2000), workers in developing countries are especially at risk due to inadequate education, training and safety systems.

The causes of accidents listed were physical, mechanical, ergonomic, chemical and biological hazards. Evidence from developing countries showed that there had been an increase in accident rates especially among migrants and daily workers as well as women and children whose volume of work are constantly rising (Pholchund, 1991, ILO, 2000). A study on farm accidents among children and adolescents carried out in the United States revealed that children who worked in agriculture suffered more than 23,000 injuries and 3,000 fatalities every year (Cordes and Rea, 1991). The commonly reported accidents included injuries from large animals, insect stings, cuts, burns and falls (Schulman et al., 1997). In a typical study carried out in Nigeria, Farinde et al., (1999) submitted that cuts from sharp objects, insect bites and injuries from animals were the common accidents among children on the farm.

In summary, evidence abounds in literature on the fact that rural children participate in farming as established by Jibowo (1992), Adewale *et al.* (1998), Ogunwale (1997), Farinde et al., (1998), Ekong (2003) and Adeokun et al (2006). Also, facts on children's vulnerability to occupational hazards were reported by Farinde *et al.* (1999) though without specific investigation into their level of knowledge of hazards and safety devices available for their uses. Therefore, the need for empirical evidence on rural children's level of Knowledge of Hazards Associated with Farming (KHAF) and the associated

personal and socio-economic variables was necessary such that the need for training for safe farming could be established. This study was therefore designed to address this gap in literature.

Justification for the Study

Available evidence revealed that farming children were exposed to farm related hazards. In order to reduce the risk of associated dangers, there is a need to ensure adequate training of children in farm accident prevention right from their formative stage. This is necessary so as to break the resultant economic cycle of disease. Economic cycle of disease as explained by National Board of Occupational Safety and Health (1982) is that in which disease and accidents on farm results in low working capacity which in turn leads to low yield and low income. This results in malnutrition, poor training, poor housing and exposure to diseases and accidents in a cycle. The only way to break such cycle would be to ensure good training in occupational health and safety. There is no doubt that education can go a long way in promoting safe farming among rural dwellers especially the children. Effective safety education could be well designed and propelled only with a better understanding of the existing level of knowledge and safety practices.

Objectives of the Study

The general objective of this study is to assess rural children's knowledge of hazards associated with farming and their related variables in the study area. The specific objectives of this study are to:

examine rural children's personal and socio economic characteristics; assess and categorize rural children's levels of knowledge of hazards associated with farming; identify the available safety gears ever used by children in the study area; analyse the relationship between the knowledge of hazards associated with farming and the personal and socio economic characteristics and describe the training need emphasis for safe farming of rural children.

The hypothesis tested was in the null form and stated that: There

was no significant relationship between knowledge of hazards associated with farming activities and rural children's personal and socio-economic characteristics.

METHODOLOGY

The study was conducted in the four geo-political zones of Oyo State. Twenty percent of the thirty-three Local Government Area (LGAs) in the state was purposively sampled such that it allowed for good dispersion among the predominantly rural LGAs. The criteria used to select the rural LGAs included population size, available infrastructural facilities and proportion of the population who are farmers as suggested by Awujoola (2000). Two rural communities having between two and three villages or settlements were randomly selected per LGA from a list using random table. Twenty-five percent of the households in the sampled communities were randomly selected for the study. In each of the selected households the eldest child aged between six and eighteen years were interviewed. A total of two hundred and twenty-nine (229) children were interviewed.

Interview schedule was used to collect relevant data from selected rural children. The instrument sought information on respondents' personal and socio-economic variables. Validity was ensured with the use of specialist in the field of Agricultural Extension and Rural Sociology while test-retest method at an interval of two weeks was used to assess the reliability of the instrument. Spearman's rank-order correlation (r) value of 0.86 obtained was adjudged good.

Selected variables were measured with direct questions and responses while some others were inferred. Attitude was measured with responses to fifteen statements on a five point Likert scale. Seven of the statements were positive while the rest were negative. Total attitude score was computed for each respondent and used to categorize them as having favourable, indifference and unfavourable attitudes. The respondents' knowledge of

hazards or dangers associated with farming was measured by assigning one score to each of the common hazards listed and mentioned by respondents and zero for the ones not aware of by the respondents. The total scores per respondent was recorded accordingly for correlation analysis used in testing the hypothesis. The mean score and standard deviation for the population studied was used to categorize the respondents as having high, moderate or low scores in knowledge of hazards associated with farming (Lawal and Jibowo, 2006). Descriptive statistics such as frequency distribution and pie chart was used to present information on the population studied.

RESULTS AND DISCUSSION

Data on personal and socio-economic characteristics of rural children presented in table 1 showed that more than half of the respondents were in the age class interval of 16 – 18 years. The mean age was 15.88 years and a standard deviation of 2.34. About 64 percent were male while the remaining 36 percent were female. In addition, 71.18 percent were living with their parents. This means that majority had their parent always by them and could learn from them in the socialization process. It also suggests that family affiliation is still treasured in the study area. About 24 percent were out of school, 68.12 percent were in school and others occasionally in-out-of school, indicating that schooling was popular and well embraced in the study area. This could be attributed to the various programmes of the government which emphasized compulsory basic education and eradication of illiteracy in line with the Millennium Development Goals of the United Nations (FWA&SD, 2006)

Only 58.95 percent of the respondents were rated high on cosmopoliteness scores, 33.19 percent had medium cosmopoliteness score while the remaining 7.86 percent had low scores. This showed that majority of rural children in the study area have been opportuned to visit urban centers at one time or the other.

Detailed information on the farming characteristics of the respondents showed that 55.24 percent owned personal farms of which 50.24 percent had farm sizes less than the average holding which was 0.71ha for the population studied and on which about 88 percent cultivated more than one type of mostly food crops at a time. Majority (52.62%) do not own livestock. Majority (76.04%) of the livestock owners had less than twenty birds or animals (ruminants or non ruminants) in all. This might be due to the time and financial outlay required for livestock production. Out of the respondents, 63.39 percent sold their farm products, 58.27 percent consumed them and 22.83 percent for philanthropic purposes.

About 58 percent had six to ten years of farming experience while 35.04 percent had less than six years of experience in farming. This means that children do join their parents on farm at an early age as supported by the findings of Torimiro and Lawal (1999). The mean income from respondents' personal farms was five thousand four hundred and forty naira ninety four kobo (N5, 440.94) per annum. Only 8.27 percent indicated that they earned above twelve thousand five hundred naira in a year from their personal farm.

Knowledge of Hazards Associated with Farming

The information on rural children's knowledge of dangers or hazards associated with farming was presented in table 2. The results showed that cut and injury from tools was most frequent. Insect bite, and eye irritation from dust were rated second, while gunshot accident, sun burn and chemical poisoning were the least mentioned dangers associated with farming. In a further analysis, each of the respondents were subjected to in-depth study in order to rate them based on the number of dangers known and mentioned in relation to the knowledge of hazards exhibited by the population studied. The data presented in figure 1 showed that 67.47 percent had a moderate or fair knowledge of hazards associated with farming while 20.08 percent

had a high level of knowledge of hazards and dangers associated with farming.

The presentation showed that majority of the rural children studied had moderate (average) knowledge of hazards associated with farming. The same trend was reported as obtainable among the adult farmers in the studies of Maroni *et al.* (1999) and CTA (2001). In the reports, most small scale farmers in the developing world were described as having less awareness and less education on the dangers associated with farming. The level and trends identified among the adult farmer which is virtually notable among children indicated that children in the study area mostly learned from their parents and would not likely surpass their source of information thereby would be unable to change the trend without any concerted efforts directed at the required change. Such efforts could be in the form of training.

The responses on available safety gears for use on the farm are also presented in table 2. Foot wears or rain-boot was the most frequently mentioned safety gear as indicated by 68.12 percent of the respondents. Others include overall dress (35.81%) and hat or cap (33.62%). Thus the devices used for safety by respondents were foot wear/rain boot, top dress, hat, rain coat and hand gloves. Those less mentioned were helmet, earmuff, eye goggles and nose mask. Generally, the use of safety devices was not very popular among rural children in the study area. They have however been confirmed to participate in farming (Adeokun *et al.*, 2006). There is an emerging need to encourage the use of safety gears among children who could be rightly described as future farmers. This is important in order to reduce the loss of time, money and even life to hazards in farming. In addition, use of safety gears would break the economic cycle of disease and accident.

Though, there is lack of adequate record of accidents and diseases resulting from non-use of safety gears by farmers, there is evidence that majority of the

children in the rural areas had one time or the other been involved in farm related hazards and accidents (Farinde *et al.*, 1999). Whenever infections of cuts and wounds are not well managed, it could result in permanent disability and even death. This trend needs be curbed by promoting the required change in knowledge, attitude and skills relating to farm related hazards and dangers through training.

The result of correlation analysis carried out to explore the relationships between the respondents' knowledge and their selected personal and socio-economic characteristics showed that at 0.01 level of significance, participation in farming (r = 0.3154), literacy level (r=0.2616), mode of living (r=0.2094), schooling status (r-0.3572), ownership of personal farm (r=0.3269), ownership of livestock (r=0.4938), farm size (r=0.4412), years of farming experience (r=0.3234), access to media (r=0.2181), cosmopoliteness (r=0.3038) sale of labour (r=0.3657), future job aspiration (r=0.1686), availability of safety gears (r=0.4730), and duration of labour on farm (r=0.3942) had positive relationship with knowledge of hazards and dangers associated with farming.

Only the family birth order significantly correlates negatively with knowledge of hazards and dangers associated with farming (r= -0.2338). Basically, this translates to mean that in the design of programme on safety gear utilization among rural children; these variables should be considered and given prominence. In addition, since access to media correlate positively with the rural children's level of knowledge of hazards, it is important that media be used in creating awareness of dangers associated with farming and the available safety devices for use during farm operations.

Evidence of Emergence of Training needs for safe farming

Sequel to the findings of this study, it is evident that rural children in the study area do not use most of the available safety gears. These inexorably expose

them to danger and hazards inherently associated with farming. In order to ensure that the trend is redressed, there is need to institute training for the rural children on safe farming. The improved knowledge, skill and change in attitude towards safety which would result from such training could promote safe farming in rural children who constituted future adult farmers.

CONCLUSION

This study revealed that majority of rural children had fair or low level of knowledge of hazards associated with farming. They do not use safety gears in most cases and are therefore constantly exposed to dangers in the field. Though records on the extent of loss in terms of time, resources committed to treatment in case of accidents and even death remains scanty, it is evident that children are vulnerable especially in the developing nations where they are socialized into farming both as a profession and way of life. The variables that correlate positively with the knowledge of dangers and hazards associated with farming among rural children are crucial to any intervention programme on occupational health and hazards prevention among rural farming children in developing nations.

This implies that children should be educated by means of training on the dangers associated with farming and ways to prevent possible accidents on the farm. This should include the benefits derivable from the prevention of dangers or hazards associated with farming. The importance of this suggestion could be linked to the fact that the participation of children in farming is basically taken as socialization or learning process instituted by the parents. The need to get children socialized into some prevailing occupations such as farming remains essential and acceptable to parents especially in the campaign for sustainable household food security (Ajayi and Torimiro 2004). While the participation of children in farming can not be prevented, it is important to ensure safety while on farm. The need to involve parents in safety programmes cannot be over emphasized.

Since most children (68.12%) were in formal schools, which also contribute to their socialization, safety and occupational health education should be included in the curriculum of educational institutions where agriculture is taught as a subject right from primary level. In addition, electronic and print media should be encouraged to participate in creating awareness among the public on the immediate and remote benefits of safety and occupational health on the farm. Agricultural extension agents should accentuate the importance of safety on farm during visits to farming families. Legislation could be put in place against non-use of safety gears on farms and strategies for its enforcement mapped out such that farmers and their children could appreciate the gains of safety and occupational health. The process of legislation should be made participatory since it relates to sustainable agriculture.

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Table 1: Frequency Distribution of Respondents According to Categories in Socio-economic Characteristics N=229

Variables	Frequency	Percentages	Central Tendency
Age in Years			
6 – 9	8	3.49	□ = 15.88
10 – 12	24	10.48	δ = 2.34
13- 15	67	29.26	
16 – 18	130	56.77	
Position in the Family			
First born	20	8.73	
In between	139	60.7	
Last born	23	10.04	
Relative	47	20.53	
Mode of Living			
With Parents	163	71.18	
With Relatives	47	20.52	
With Friends	19	8.30	
Schooling Status			
In school	156	68.12	
Out of School	54	23.58	
Occasionally in out of school	19	8.30	
Cosmopoliteness			
High level	135	58.95	
Medium level	76	33.19	
Low level	18	7.86	
Attitude towards Farming			
Favourable (4.39 – 5.00)	42	18.34	
Indifference (3.56-4.38)	155	67.69	
Unfavourable (3.55-1.00)	32	13.37	
Sale of Labour on Farm			
Sell labour	122	53.28	
Does not sell labour	107	46.72	
***Income From Farming (Naira)**			
<2,500	41	17.90	
2,501 – 5,000	35	15.28	□ = N7,625:00
5,001 – 7,500	12	5.24	δ = N4,155.56
7,501 – 10,500	20	8.73	
10,501 – 12,500	9	3.93	
12,501+	10	4.37	
Do not own personal farm	102	44.54	

*As at the time of this study US$1= N137 ; □= mean; δ= standard deviation

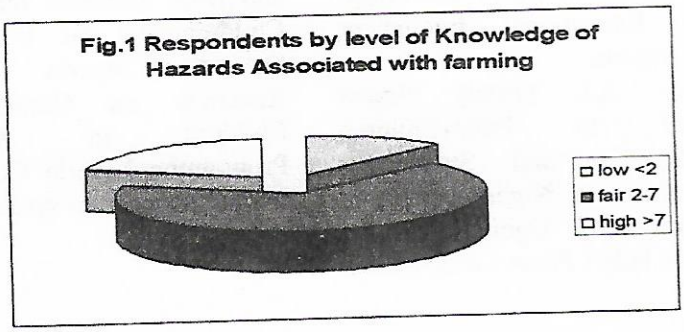
Table 2: The dangers associated with respondents' farming and the available safety gears. N=229

	Frequency	%	Rank
Dangers Associated with Farming			
Cut/injury from tools	199	86.90	1
Cut/injury from machines	50	21.83	7
Injury from animal traps	99	43.45	6
Chemical poisoning	33	14.19	9
Gunshot accidence	17	7.64	10
Eye irritation from dust	150	65.50	3
Snake bite	104	45.41	4
Insect bite	175	76.42	2
Animal bite	35	17.25	8
Injury from stump/root/thorn	104	45.20	5
Others (sunburn)	8	3.49	11
Safety Wears Available for Use			
Foot wear/Rain-boot	156	68.12	1
Hand glove	49	21.40	5
Nose mask	20	8.73	7
Eye goggle	40	17.47	6
Ear muff	4	1.75	9
Overall/Top dress	82	35.81	2
Hat/Cap	76	33.19	3
Rain coat	61	26.64	4
Helmet	9	3.93	8

Table 3: Result of correlation analysis showing linear relationship between rural children's personal and the socio-economic characteristics and their knowledge of hazards associated with farming

Variables	Correlation Co-efficient (r)	Coefficient of determination (r^2)
Participation in farming	0.3154**	0.0994
Age	0.0834	0.0547
Position in the family	-0.2338**	0.0547
Mode of living	0.2094**	0.0439
Literacy level	0.2616**	0.0684
Educational level	0.0694	0.0048
Schooling status	0.3572**	0.1276
Ownership of farm	0.3269**	0.1068
Ownership of livestock	0.4512**	0.0036
Purpose of production	0.4938**	0.2438
Farm size	0.4412**	0.1947
Years of farming expenses	0.3234**	0.1046
Access to media	0.2181**	0.0476
Cosmopoliteness	0.3038**	0.0923
Sale of labour	0.3657**	0.1337
Income from farming	0.005	0.00003
Attitude towards farming	0.0872	0.0008
Future job aspiration	0.1686*	0.0284
Availability of safety gears	0.4730**	0.2237
Duration of labour on farm in Hours	0.3942**	0.1554

** Significant at P<0.01; * Significant at P < 0.05



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CASSAVA WASTES UTILIZATION AMONG THE RURAL YOUTH IN OYO ENVIRONS OF OYO STATE.

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Recycling of biodegradable waste has been variously reported as one of the sure panaceas to the challenges of environmental pollution, and a viable strategy for wealth creation. It is, therefore, against this background that this study investigated rural youth's perception of utilization of cassava wastes in Oyo, Oyo State of Nigeria. Specifically, it described the demographic characteristics of the respondent; determined the rural youth's perception of cassava wastes; established the correlates of youth's perception; examine the constraints associated with rural youth's perception of utilization of cassava wastes. A snow-ball sampling technique was used to select eighty youth involved in cassava processing in Oyo environs. Pre-tested and validated interview schedule was used to elicit qualitative and quantitative information from the respondents. Frequency percentage, mean and standard deviation were used to describe the data just as Pearson's correlation was used to make some deductions. The results, among others, revealed that the mean age of the respondents was 23 years with standard deviation of 6.5. Also, at $P \leq 0.05$ level of significance, level of income ($r = 0.643$), level of education ($r = 0.588$), years of involvement ($r = 0.456$), frequency of contact with extension ($r = 0.325$), level of awareness of waste utilization ($r = 0.319$) and number of training received on cassava production ($r = 0.297$) had positive and significant relation with youth's perception of cassava waste utilization. The study, therefore, concluded that the level of youth's awareness of cassava waste utilization be raised through effective extension service deliver. Also, it suggested that putting in place an interventionist's programme that encompasses empirical investigation into various uses of cassava waste and appropriate extension component would turn the cassava waste to wealth for Nigerian youth.

Keywords: Perception, cassava waste, utilization, youth.

INTRODUCTION

Within the past 200 years, the quest for development and advancement by humans to wriggle itself out of poverty and better their living conditions has led to the development of more powerful technology which has increasingly made and transformed the planet in ways that the natural processes and previous civilization would have

taken millennia to achieve. In this short era of modernity man has wrought dramatic changes to the environment, the most far-reaching being our effect on the chemistry of the atmosphere and the genetic diversity of the planet. These changes have given rise to fear of a global environmental crisis as a result of exploitative industrialism leading to air and water pollution, global warming, declining biodiversity, solid waste and much more.

Evidence is mounting that mankind is running up an environmental deficit, profound and negative long-term harm to the natural environment caused by humanity's focus on short-term material affluence (Bormana, 1990). The concept of environmental deficit is important for three reasons. First, it reminds us that the state of the environment is a social issue (at least man is involved), reflecting choices people make about how to live. Second, it suggests that much environmental damage-to the air, land, and water is unintended. By focusing on the short-term benefits of say cutting down forest for production activities, heap making which exposes the soil to erosion, or effluent released around processing sites, we fail to see their long-term environmental effects. Third, in some respects, the environmental deficit is reversible.

By no means, the cassava industry in Nigeria is one of such human activities focused on poverty alleviation and improved living condition of the people through mass production, processing and export of cassava crop. To this end, the Presidential mandate to raise the production level of cassava from its present 42 million metric tonnes to 150 million metric tonnes by the end of the year 2010 (Bello, 2006) is meant to stimulate the cassava industry. Estimates of industrial cassava use suggest that approximately 16 percent of cassava root production was utilized as an industrial raw material in 2001 in Nigeria. This estimate leaves 84 percent of production for food consumption. Expectedly, a great portion of the crop is lost in post harvest

operations as cassava processing activities carried out by small, medium, and large scale agro-industries generates a massive amount of solid waste in the forms of cassava peels, shafts, effluents, starch residues, in starch processing, small-scale processors produce between 130 – 160 tonnes of residue daily (equivalent to 200 tonnes of residue per family each year) (Viet, 1998). The residual water contains small amount to starch, proteins and hydrocyanic acid (HCN). When this effluent is released directly into streams or rivers, the residual starch in it can cause rapid growth of bacteria, resulting in a depletion of oxygen and detrimental even lethal effects on aquatic life. Besides, when untreated, this residual water may be displayed around processing sites in the form of stagnant effluent ponds from which strong odours emanates. Other forms of processing, particularly grating and chipping generate very visible dust waste, as high as 10 percent of the dry weight of cassava can be lost as dust (Sriroth *et al.*, 1999). As a consequence of the visual display of pollution, cassava is often perceived by scholars as contributing significantly to environmental deficit. The reversibility of this deficit on the environment so created as a result of the massive solid waste emanating from cassava processing through recycling (i.e. reusing resources we would otherwise discard) to create wealth for the teaming youth of this nation is, therefore, the focus of study.

Objectives of the Study

This study investigated rural youth's perception of utilization of cassava wastes in Oyo of Oyo State, Nigeria. The specific objectives are to: describe the demographic characteristics of the respondents in the study area; determine the rural youth's perception of cassava wastes in the study area; determine the level of rural youth's involvement in cassava processing; establish some socio-economic correlates of the youth's perception of cassava waste.

CONCEPTUAL FRAMEWORK

Nature expects mankind to share the duties of public care- this

thought of Ben Franklin (1706 – 1790) captures the context upon which this study is based. Ben's book "Poor Richard's Almanack for kids" had the intent of inculcating in kids early in life the value and culture of environmental quality and sustainability at a time in life when virtue may best take hold. From the very on set, has humans developed more powerful technology; people recognize the material benefits of industrial technology and our ability to remake our world as we choose. But only a century later did mankind began to see the long-term deleterious effect on the natural environment. Indeed, one trait of the recent post-industrial era is a growing concern for environment quality (Abramhamson, 1997, Kidd and Lee, 1997). Today, we realize that the technological power to make our lives better can also put the lives of future generation in jeopardy (Voight, cited in Bormann and Kellert, 1991).

Maintaining environmental sustainability will lead us to evolving an ecologically sustainable culture which according to Macionis (2001) is a way of life that meets the need of the present generation without threatening the environmental legacy of future general. A sustainable environment Macionis (2001) asserts demand an exocentric outlook that help us see how the present is tied to the future and why everyone must work together as a against an egocentric outlook that sets our interests as a standards for how to live. This viewpoint is opposed by the Technocentric which places faith in the capacity of technology to harness nature and substitute man-made capital for natural resources where required. This approach tends to ignore the implication of our ignorance of the dynamics and potential for the collapse of the ecosystems that are stressed by over exploitation or pollution. It also neglects the value that many find intrinsic in wildlife and landscape.

At the opposing humans extreme is the bioethics view, in which moral right are conferred on other species and are required to respect intrinsic value in all nature and

live in harmony with it. This broad approach is highly unlikely ever to appeal enough people to form the basis for a realizable economic programme. It also provides little or no guidance on deciding between human development and nature preservation in cases where human and non-human interests – in theory equal–are in conflict (Pearce and Turner, 1990).

Neither of these positions is compatible with sustainable development and ecological sustainable culture of seeking to enhance diverse forms of human development while maintaining the natural capital stock for future generations. The techno-centric position risk unsustainable disruption of ecosystems and bioethics view is politically unacceptable and impracticable in the face of industrialization of the planet and the aspiration of most of the world to better quality of life chances for human development. The 'managerial' and 'communalist' approaches are those associated with human 'stewardship of nature, with differing emphases on the extent to which development should be constrained and modified by environmental considerations. It recognizes the need for sustainable growth to improve human development and environmental protection in the poor world. An opportunity according to Ree cited in Carley and Christie (2000) is therefore, open for humanity to correct an historical error and develop a gentler, more balanced, and stable relationship with the natural world. Correcting this environmental deficit created by mankind requires sustainable living which according to Macionis (2001) depend on three strategies: bringing population growth under control; conservation of finite resources; and reducing waste i.e. turning waste into reusable resources which can be a source of wealth creation to an impoverished poverty stricken society.

METHODOLOGY

The study was conducted in Kakanfo area of Sabo community in Atiba Local Government Area of Oyo State. Kakanfo gari processing unit was purposively

chosen for the research because of the high concentration of cassava processors. A snowball sampling technique was used to select eighty youth involved in cassava processing in the study area. Pre-tested and validated interview schedule was used to elicit qualitative and quantitative information from the respondents. Descriptive and non-descriptive statistics were used to analyse the data collected. These include frequency distribution, percentages, mean and correlation. Pearson's correlation coefficient was used to measure the association between some selected characteristics of cassava processors and perception of waste on cassava processing.

RESULTS AND DISCUSSION

Demographic characteristics of respondents

Results revealed in table 1 shows that 25.00 percent of the respondents were between 22–24 years of age, 22.5 percent were between 28–30 years of age while 18.8 percent were between 19– 21 years of age. About 17.5 percent of the respondents were between 25–27 years of age while few (16.3%) were between 15 – 18 years of age. This implies that majority of the active cassava processors were young people above 22 years of age. The probable reason for this could be the fact that most of this youth were already out of school and has taken up cassava processing as a means of livelihood. Fasina and Adekoya (2006) were of the opinion that older children are more likely to be involved in agricultural activities than the younger ones. Data on sex revealed that majority of the respondents were females (66.25%) while the remaining 33.75 percent were males. This implies that cassava processing activities is female dominated. On the level educational attainment, about 56.25 percent of the respondents completed secondary education while 26.25 percent and 7.50 percent of the cassava processors completed primary and post secondary school education respectively. Very few of the respondents (10.00%) had not attended school at all. These finding showed that majority of the respondents

(90.00%) were literate while 10.00 percent were illiterates.

Data on income per month revealed that majority (71.25%) of the respondents had a monthly income of between ₦5,000.00–₦9,000.00 from cassava processing, 18.75 percent of the respondents had between ₦990.00–₦4,900.00 as income per month, and 8.75 percent of the respondents realized between ₦10,000.00–₦14,900.00 from cassava processing per month while1.25 percent earned between ₦15,000.00 and above as in come from cassava processing. This implied that majority of the cassava processors made slightly above the minimum wage from cassava processing per month.

Involvement in cassava processing

Table 2 provides information on the years of involvement, area of specialization, channels of involvement, channels of training, sources of cassava, cassava products, waste experience, and waste disposing channel. On years of involvement, majority (55.00%) of the respondents had between 0–5 years of experience as cassava processor. About 31.28 percent of the respondents had been involved in cassava processing between 6–10 years, 10.00 percent had been involved in it for between 11–15 years while few (2.50% and 1.25%) has been involved in cassava processing between 15– 20 and 20 years and above respectively. This implied that the older the involvement of cassava processors, the lesser their participation in cassava processing. In the area of specialization, majority (28.75%) of the cassava processors took to cassava frying as there area of specialization. About 20.00 percent took cassava peeling as their area of specialization, 15.00 percent to grating grinding, 13.75 percent to cassava sieving while 12.50 percent and 10.00 percent took packaging/marketing of processed cassava and shaft processing respectively as there area of specialization. This implied that there are many areas of specializations inside cassava processing and that division of labour is highly practiced among the cassava processors. Most of

the respondents (48.75%) were involved in cassava processing on their own. 26.25 percent of the respondents got involved through their parents while 25.00 percent were involved through their friends. As for waste experience the result show that majority (57.50%) of the respondents normally experienced waste from cassava peels, 22.50 percent of the respondents normally had waste from cassava water or slurry, 18.75 percent of the respondents experienced waste cassava shaft. 1.25 percent of the respondents experienced waste from other means such as drought especially in the rainy season. This implies that the processors experienced cassava waste in all the stages of cassava processing.

Results on waste disposing channels showed 52.5% of the respondents said that people come to pack the cassava waste from the workshop, 17.50 percent of the respondents claimed that they usually used them to feed their livestock, 10.00 percent of the respondents claimed that they usually disposed them to the dunghill. Other (5.00%) of the respondents claimed that they dispose their waste through selling. 15.00 percent of the cassava processors did not respond. This implied that some normally dispose their waste mostly through means that resulted to additional income.

Perception on the cassava waste

Responses on the perception on cassava waste are shown in Table 3. Results revealed that respondents agreed that cassava waste is useful to the livestock industry (52.50%), source of pollution to the environment (36.25%), and government assistance being needed in disposing cassava waste (43.75%). This implied that since some of the respondents realized that cassava waste constitutes a great nuisance to neighbours and themselves, as a result the government and non-governmental organization should organize a meeting/symposium through the extension agencies with the assistance of local leaders to sensitize the cassava processors of the inherent benefit in recycling cassava waste which eventual will lead to wealth

creation and put a stop to poverty in the land. The study also, shows that some of the respondents strongly disagreed (25.00%) and disagreed (21.25%) that cassava waste was of no value to them indicating that some of the respondents realized that cassava waste was of value to them but they lack adequate information on how the waste could be utilized to their own advantage.

Socio-economic correlates of youth's perception of cassava waste

The result of statistical test for relationship between cassava processors' socio-economic characteristics and their perception on waste from cassava processing revealed that level of income (r = 0.643), level of education (r = 0.588), years of involvement (r=0.456), frequency of contact with extension (r = 0.325), level of awareness of waste utilization (r = 0.319) and number of training received on cassava production (r = 0.297) had positive and significant relationship with youth's perception of utilization of cassava waste.

CONCLUSION

The results of the study revealed that majority of the youths have been involved in cassava processing for as much as 10 years, specializing mostly in gari frying. Many of the youths got involved in cassava processing on their own suggesting they have decided to make cassava processing a source of livelihood. Majority of the processor had no contact with extension agents or with any governmental body concerned with training especially in the area cassava waste utilization. This probably explains why many youths in the study area do not attach much importance to waste generated from cassava processing. A higher proportion of the processor perceived cassava waste as a source of environmental pollution and constituting a great nuisance to the neighbourhood and themselves craving the government assistance in clearing these wastes.

It is therefore, recommended that government through its agencies should find a way of linking these young cassava processors and

manufacturing industries for further utilization of the so called waste generated from cassava. This would encourage the processors to produce efficiently and effectively. Government should put in place an interventionist's programme that encompasses empirical investigation into various uses of cassava waste and appropriate extension component with up-to-date information of utilization of cassava tuber as a whole that would turn cassava waste to wealth for Nigerian youth.

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Table 1: Demographic characteristics of respondents

Variables	Percentage	Frequency
Age		
15 – 18	16.25	13
19 – 21	18.75	15
22 – 24	25.00	20
25 – 27	17.50	14
28 – 30	22.50	18
Sex		
Male	33.75	27
Female	66.25	53
Level of education		
None	10.00	8
Primary	26.25	21
Secondary	56.25	45
Post Secondary	7.50	6
Income per month		
N990 – N4,990	18.75	15
N5,000 – N9,990	71.25	57
N10,000 – N14,990	8.75	7
N15,000 and above	1.25	1

Table 2: Involvement of respondents in cassava processing

Variable	Percentage	Frequency
Years of Involvement		
0 – 5	55.00	44
6 – 10	31.28	25
11 – 15	10.00	8
15 – 20	2.50	2
20 and above	1.25	1
Areas of involvement		
Peeling	20.00	16
Grating/grinding	15.00	12
Frying	28.75	23
Sieving	43.75	11
Shaft processing	10.00	8
Packaging	12.50	10
Channel of involvement		
Parent	26.25	21
Friends	25.00	20
Others	48.75	39
Waste experience		
Cassava peel	57.50	46
Cassava shaft	18.75	15
Cassava water/slurry	22.50	18
Others	1.25	1
Waste disposal channel		
People come and pack them away	52.50	42
Dispose to public dunghill	10.00	8
Feeding livestock	17.50	14
Selling	5.00	4
No response	15.00	12

Table 3: Youth's perception on waste

Variable	Percentage	Frequency
No use of anybody		
Strongly Agree	7.50	6
Agree	25.00	20
Undecided	28.75	23
Disagree	23.75	19
Strongly disagree	15.00	12
Government assistance		
Strongly Agree	27.50	22
Agree	43.75	35
Undecided	12.50	10
Disagree	15.00	12
Strongly disagree	1.25	1
Useful to livestock industry		
Strongly Agree	13.75	11
Agree	52.50	42
Undecided	23.75	19
Disagree	2.50	2
Strongly disagree	7.50	6
Source of pollution		
Strongly Agree	16.25	13
Agree	16.25	13
Undecided	13.75	11
Disagree	23.75	19
Strongly disagree	10.00	8
No value		
Strongly Agree	6.25	5
Agree	36.25	13
Undecided	31.25	25
Disagree	21.25	17
Strongly disagree	25.00	20

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ADOPTION OF INDIGENOUS FABRIC PRINT TOWARDS MEETING CLOTHING NEEDS AMONG RURAL YOUTHS IN SOUTHWESTERN, NIGERIA

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The paper focused on factors affecting adoption of Indigenous Fabric Print (IFP) towards meeting clothing needs among youths in the South West States of Nigeria. Specifically, IFP serviceability and performance were empirically investigated. Data were collected using structured interview schedule to elicit information from four hundred and fifteen youths. Also, systematic observations were made to generate qualitative discussion. Frequency counts, percentages, and means values were used to describe the data, while Pearson's correlation (r) was used to test the hypotheses. Majority of the youths interviewed were still in school, with high external orientation. It was also evident in the study that 71 percent of the youths claimed that their parents were responsible for their clothing, but they were allowed to select the type they desired without rigid interference from the family. All the youths studied have low knowledge on fabric selection. Social status, vogue, aesthetic value, and fitness in such an order, were the major factors considered in clothing selection. The level of awareness of IFP was high, but its adoption for clothing was very low. The serviceability of IFP was rated low among the youths. Very low percent signified that the device was compatible with their clothingstyle, personalstyle, bodystyle, colorstyle, fashion trends, family status, and lifestyle. IFP performance was also rated very low. All these indicators are major factors that an individual will always put into consideration before choosing and adopt any object for clothing device.

Keywords: Adoption, Indigenous fabric print, Clothing needs, Rural, Youths

INTRODUCTION

One of the most important factors which differentiate man from other animals is clothing. It is used not to only provide micro-climate for the wear's body, but also to conceal the body, and reveal his status and personality. To satisfy these concealing and revealing processes, diverse kinds of planar dimensional objects such as leafs, animal skins, and man made fabrics were used and this represents a major factor in the satisfaction of human psychosocial development. Clothingstyle changes when the wearers leaves the cradle, enter pre-school age, school age, adolescence, or start to work,

getting married, get promotion, even, death has a special wardrobe both for the death and mourners. This phenomena establishes a person's identity, reflect the wearer's goals and moral principles, communicates self-assurance or the lack, and conveys the activity a person is about to engage in. It may also be used as costume to represent something, and as a uniform to denote a membership of a defined group. Alyn(2006) claimed that, clothes people wear must in different situation keep their bodies warm, or cool, keep them out of wind or water, and should permit the evaporation of perspiration from the surface of the body.

The design of clothing primarily influences the decision to buy, but one step behind the decision to buy is the behaviour of people towards clothing. Clothing is important for reasons that go far beyond physical necessity; looking one's best is a matter of both pride and practicality. Yet many find this hard to accomplish, despite the great varieties of clothing styles and fabrics available globally in a wide price range. Meanwhile, being well dressed does not require a lot of money or clothes, but certain conditions are required such as, "dress sense" skills, knowledge of oneself, the basics of good design of fabrics, and care.

Many scholars have proved that clothing is of course, a necessity in keeping men's covered and comfortable, but it goes far beyond this fact or else attiring oneself would be simple indeed. The truth is that besides meeting basic physical needs, clothing offers other countless possibilities. Clark (1984) declared that, when one dress attractively and suitably, it soars self-confidence and social security. So, it is a factor in expressing individuality. However, what individual wears makes lot of statement about their age, gender, status, tastes, degree of pride, and self-respect. It also enhances acceptability among certain group and authority.
Consumers are both delighted and confused by the infinite variety of clothing materials available today.

These have been developed to meet countless conditions and desire in the most attractive ways, ranging from ease of care, wrinkle and stain resistance, self-lined fabric, thermal comfort, and others. Generally, the principle still stands that, clothing must enhance the figure of the wearers, works with what is in his closet and fit into their budget, and environment. The design lines needs to accentuate the assets and lead eyes away from liabilities.

One must also take the cognizance of how the fabric look and drape on the body. The more absorbent fibres are the more comfortable to humidity. Since, they absorb moisture; they are less prone to static electricity and will be cleaned more easily. The less absorbent fibres are, less comfortable they are to wear, but since they are less affected by body heat and moisture, they wrinkle less and hold their shape better although, they become static prone and might pill more easily. The length of the fiber present in fabrics also affects its performance and appearance, finishes and fabrication method are other vital factors that affect durability and appearance of any fabric. Therefore in clothing, people need to be trained and knowledgeable on the principles of "fabric selection".

However, the rate of technological growth in the textile sectors world wide has produced vast classes of industrial fabrics to meet the recent population and social growth in the area of fabric needs. The indigenous textile industries are still crawling along side with the industrial textile, mostly in Africa. Nigeria has been identified for her indigenous fabric print, called Adire or Batik. The two names are derived from the method of blockage used during the dyeing process. They both represent means of decorating or fouling two-dimensional plain object. The major materials in IFP production include plain fabric, dyestuff, mordant, and resister (raffia, wax, paste). Any fabrics that have good affinity value for dye could be used. Different motifs can be used and these motifs are mostly influenced by the dictates of the

tradition, but in most cases the desire of the consumers prevails.

Choice of motif in IFP varies among individuals, and it being guided by age, lifestyle, colour style, and body style. The desire to satisfy clothing varies from one phase of human development to other. At the infanthood, to school age stage the parents apart from the physic-cultural environment dictates clothingstyle, and the major factors considered are combination of comfort and ease of care. As individual enters the youth phase, the taste and lifestyle change. Peer groups and environment are most critical influencing factors here. Ruth (1994) identified that clothing style changes drastically because individual always seek identification and acceptance to a class of their choice. So they become very cautious of their clothing and other activities. The desire to satisfy these basic necessities of life is very critical and difficult to meet at this phase. Anne (2005) identified the economic status of the family as a major supporting factor. In most cases, inability of meeting clothing need had led several youths into various nefarious activities such as prostitution, arm robbery, ritual killing, among others.

However, streams of programmes had been put into place on youths empowerment and emancipation both by government and non governmental organizations focusing mainly on economic development through agriculture and non agricultural enterprises. Also, social researchers have failed in giving attention to clothing needs among the youths. Since IFP has been identified as a means to an end in clothing, and Nigerian youths are yet to embrace it. The study therefore, identified those factors affecting the adoption of IFP as apparel/cloth among the youths with the following specific objectives to:analyse psychosocial characteristics of youth affecting adoption of IFP for clothing; investigate IFP serviceability among the youth population; examine IFP performance among the youth in the study area; and assess the determinant of IFP

adoption among youth in the study area.

METHODOLOGY

The study was carried out in Southwestern States of Nigeria, which comprises six States, from which three were purposively selected based on the rustic level of such State. The selected States were Ondo, Ekiti, and Osun. Structured interview schedule was used in eliciting information from the respondents. Three Local Government Areas (LGA's) were randomly selected in each of the States, totaling nine LGAs in all. Two to three percent of the geopolitical wards based on their number in each of the LGA were selected, and random sampling was used in selecting ten youths in each of the ward. A total of four hundred youths were interviewed. The data were analyzed using statistical package for social sciences (SPSS). Descriptive statistical techniques such as frequency counts, percentages and means were used to describe the results on psychosocial characteristics of the respondents. Likert scale was employed to measure IFP serviceability and performance, where the value of standard deviation subtracted from the mean scores was used as cut off point for low scores, and means score added to the value of standard deviation was used as the cut off point for high scores. This was used to categorize the respondents into high, moderate, and low scores. Pearson's correlation (r) was used to test the hypotheses, and coefficient of determination (r^2) was used to determine the strength of association between the variables.

RESULTS AND DISCUSSION

Psychosocial characteristics of the respondents

Analysis revealed that 59 percent of the youths studied were female, and 41 percent male, with mean age of 18 years. Eighty six percent were single and 14 percent were married. Fifty one percent were still in secondary school, 24 percent had completed secondary school education, while 8 percent had incomplete secondary school, and 17 percent had tertiary education. Twenty nine percent were living independently, while 71 percent

were still dependent. About 59 percent of the respondents were Christian, 36 percent Muslim, and only 5 percent were traditionalist. Practically, all the respondents had higher external orientation. Fifty four percent traveled fortnightly, monthly (15.0%), and quarterly (31.0%) to other States in the federation. All the respondents' belongs to religious organization, community age group (22.0%), political organization (63.0%), and social club (97.0%). Seventy six percent of the youths studied were Yoruba, Igbo (16.0%), and Hausa (8.0%).

Forty nine percent of the respondents signified that, their parent were farmers, traders (42.0%), and civil workers (9.0%), 71.0 percent parents of these youths were also involved in politics as a minor occupation. Investigation revealed that 32.0 percent of the respondents were dependents that received weekly allowance from their parents, monthly (18.0%), daily (37.0%), and 13.0 percent were not receiving any allowance. The amount gotten as allowance per month by majority (62.0%) was between N1,000 – N2,000 per, N2,001 – N3,000 (11.0%), and above N3,000 (7.0%). Most (71.0%) signified that their parents were responsible for their clothing, and 68.0 percent were allowed to select the type they desired with no rigid interference on what to select.

In-depth study on sources of information on fashion trend revealed that 14 percent received information through television, contact with the outside environment (74.0%), peer group (96.0%), and magazine (6.0%). Majority (76.0%) of the respondent's parents traveled within the State everyday, and 40 percent to other State weekly, and fortnightly (54.0%). About 56 percent received visitors from within and outside their community very often, often (16.0%), and rarely often (28.0%). Again, 57.0 percent often attends party (social gathering), rarely often (32.0%), and very often (11.0%). Seventy six percent purchased clothing items outside their locality, and 24 percent within. While 99

percent of those who purchased their clothing items outside their community said that, they do so because, the types and qualities they desired are not available in their areas, 78.5 percent spent less than N5, 000 on clothing per annum and above N5, 000 (22.0%).

Analysis on the respondent's knowledge on fabric selection was scored low (91.5%) and moderate (8.5%). While 26 percent considered comfort in fabric selection, durability (20.0%), ease of maintenance (17.0%), aesthetic value (93.0%), fitness (83.0%), vogue (96.0%), social status (99.0%), cost (24.0%), religion (21.0%), and only 1.0 percent considered culture. Actually, the basic factors in fabric selection are comfort and fitness. About 99.0 percent preferred clinging lightweight fabrics, just few (9.0%) liked stiff/standing out fabric materials, in any case stiffness is the original drape quality of IFP. While 73.0 percent wore warm colour fabrics, 27.0 percent liked cool colour. In-depth investigation into the respondents size of wardrobe shows that majority (61.0%) has 15–20 complete apparel (clothes), 10 -14 (24.0%), and less than 10 (15.0%). About 45.0 percent wore clothes twice before washing, once (17.0%), thrice (15.0%), more than thrice (3.0%), and 20.0 percent only washed when the clothes are dirty.

However, use of clothes varies with region and occupation. In tropical region where climate is hot, it has been recommended that cloth should not be worn more than once before washing, because of perspiration after effect (AATCC, 1990). When 10.5 percent changed their wardrobe every three months, six month (27.0%), yearly (33.0%, and about 30 percent changed theirs once in 3 years. Fifty percent considered fading in discontinuation of clothes, surface distortion (11.0%), colour bleeding (58.0%), and fad (92.0%).

Detailed investigation into the family socio-economic status of the respondents showed that 55 percent of the parents were literate, 17.0 percent owned a car, and house (86.0%). Fifty nine

percent has access to good housing, good health care (34.0%), good and desired clothing (61.0%), good food (42.0%), good education (53.0%), and good road (45.0%). Forty three percent claimed that public transportation are moderately available, not available (57.0%), 11 percent notified that the transportation fare are moderate, high (84.5%), and undecided (4.5%). Again, 29 percent have saving bank account, and 71 percent has none. Eighty two percent indicated that there were established markets in their community, functional electricity (73.0%), bore hole (68.0%), school (56.0%), restaurants (51.0%), post office (34.0%), police station (39.0%), motorpark (35.0%), community library (10.0%), supermarket (11.0%), cybercafé (8.0%), and telephone/handset (66.0%). Assessment of the level of awareness of the used of IFP was scored very high (84.0%), low (1.5%), and moderate (14.5%). This assessment was based on the youth level of understanding of various areas of application, and availability of IFP. Level of its adoption for clothing was scored low (87.0%), medium (10.0%), and high (3.0%). This was assessed through the attitude of the respondents to use of IFP as clothing device. Seventy nine percent has neutral attitude, 15.0 percent negative and positive (5.0%). About 20.0 percent wore IFP once in a month, fortnightly (23.0%), weekly (2.0%), and occasionally (55.0%). While 25.0 percent keeps between 2 – 4 IFP in their wardrobe, 75 percent kept less than two.

Indigenous Fabric Prints Serviceability

In-depth assessment of the ability of IFP in satisfying the desire of the consumers (serviceability) was rated low by, while 89.5 percent were undecided (9.5%). This rating was based on IFP characteristics. About 80 percent agreed that the product is attractive in appearance for its end use, and 20 percent disagreed. Seventy six percent agreed that the colour of IFP is appropriate with its end use, texture (17.0%), crimp (21.0%), drape (9.0%), elasticity/stretch (0.5%), and strength (91.0%). Further again,

93.0 percent agreed that IFP was compatible with their culture, lifestyle (37.0%), clothingstyle (2.5%), personalstyle (6.0%), bodystyle (15.0 %), colourstyle (11.5%), fashion trends (8.5%), and family status (23.0%). About eighty seven percent strongly disagreed that IFP looks and moves good on their body, and 97.0 percent explained that the fabric absorb perspiration without been stain. Eighty three percent complained that the material is heavy, but does not generate heat. This might be due to the fire origin present in IFP, which is usually composed of cotton. About eighty one percent agreed that it is highly affordable in relative to other clothing materials, and 98.0 percent signified that it is a good means of enhancing identity.

Again, 54 percent strongly agreed that it has high comfort value, disagreed (10.0%), and 36.0 percent was undecided. Majority (81.0%) rated its relative advantage as low, while the remaining 29 percent was indifferent. All the respondents notified that, the fabric is not transparent. About 67 percent strongly agreed that it is very difficult to maintain, agreed (32.0%), and indifferent (1.0%). Sixty nine percent agreed that IFP do not build up static electrons with human body unlike the polyester. This might account for its high comfort value. Again 43 percent said that IFP is moderately available in the study area, not available (47.0%), and available (10.0%). About 93 percent noted that it absorbs moisture, so it has a good hygienic value. Ninety one percent said that IFP is in line with their cultural clothingstyle, while 4 percent disagreed, and 97 percent claimed that the colour fit into their cultural colour.

Indigenous Fabric Print Performance

Assessment of reactions of IFP materials under various conditions (performance) was rated low (59.5%), high (3.5%), and moderate (37.0%). The rating was based on the reaction of IFP to care (maintenance and storage). Majority (86.0%) agreed that IFP does not retain its new look with use and care, and 14 percent was

undecided. Practically, all the respondents strongly agreed that it is very important to sort IFP based on colour before washed, or else the colour will run to other material that are present in the load of laud. While 82 percent strongly agreed that washing of IFP required the use of soap, which they all agreed to be much more difficult and costly than detergent, about 93 percent said that it takes longer circulatory system to wash. Seventy three percent strongly agreed that stains are very difficult to remove from IFP, but they explained further that the stains hardly show.

Assessment of aesthetic finished of IFP was rated low (71.5%), moderate (28.0%), and none rated it as high. Ninety nine percent said that IFP losses its luster quality easily. All the respondents signified that IFP hang straight/stiff over a three dimensional shape, and that the sizing that support this hanging caused bad odour, and mildew attack on the fabric if not dried within a day. It was identified that the fabric shrinks with care. While 57.0 percent classified the type of shrinkage as "relaxation", and 43.0 percent said it was a "progressive" shrinkage. All the respondents also strongly disagreed that the fabric is wrinkle resistant. The soil and stain release qualities of IFP was rated as moderate by (62.0%), and low (38.0%). The studied youth also claimed that IFP is easily damaged by insect and moth if soiled. While 97.0 percent said that it is easily attacked by mold and mildew during storage, 94.0 percent strongly agreed that IFP is a good fire retardant. Again, 88 percent agreed that stain removal cannot be used on IFP, and 11 percent disagreed. Assessment of peculiar problems attached to IFP was revealed as off-shade (72.0%), frosting, and crocking (91.0%) respectively, bleeding (99.0%), migration, fume fading, poor fastness to sunlight, and out of register of grain (100.0%) respectively. Investigating the smoothening performance of IFP showed that 93 percent rated it as very difficult, and moderate (7.0%). Ninety nine percent claimed that it ironed better with steam at very high temperature, but they quickly notified that it

migrates and fades easily with the use of steam iron. Analysis again revealed that, 78 percent of the respondents had low knowledge on how to prevent peculiar problems of IFP with use, and the remaining 12 percent had no knowledge at all. While 59 percent said that they applied salt into the solvent during cleaning procedure, 36 percent used mild soap, cold water (5.5%), and 88 percent hang dry the fabric in a shade so as to prevent problems.

Correlation analysis showing the relationship between adoption of IFP and clothing needs among youths

The variables studied were subjected to Pearson correlation analysis. The result on Table 4 showed that the adoption of IFP had positive significant correlation at $p \leq 0.05$ with age ($r = 0.61$), level of awareness ($r = 0.336$), fit into lifestyle ($r = 0.376$), fit into clothing style ($r = 0.393$), aligned with personalstyle ($r = .259$), aligned with fashion trend ($r = 0.341$), enhanced identity ($r = 0.316$), and smoothening performance ($r = 0.305$). The above information established that an increase in the value of the above significant variables would results in corresponding increase in the adoption of IFP. The other variables which are significant negatively with adoption of IFP was cosmopolitness ($r = -0.299$), social participation ($r = -0.381$), and off shade ($r = -0.259$). These variables therefore, are very paramount factors in the adoption of IFP for clothing among youths and should be put into considerations by the producers. The values of coefficient of determinant (r^2) in Table 4 further indicated the percentage contribution of the corresponding variables to the adoption of IFP. The higher the value of r^2, the stronger the influence as reflected in the percentage contribution of the significant variables. This information therefore, justified these variables as highly significant in the adoption of IFP towards meeting clothing needs among the rural youths.

CONCLUSION

The study revealed that majority of the youths belonged to one social organization or other, with

higher external orientation, and have average monthly allowance between N1, 000 – N2, 000. They had low knowledge on the factors affecting fabric selection, in which majority (93.0%) considered aesthetic value, social status (99.0%) and vogue (96.0%). While majority likes lightweight clinging clothing materials with warm colour, most changed wardrobe at least once in a year. The level of awareness of IFP was scored high, but its adoption level for clothing among the youth was low. Majority claimed that it was affordable and fit into their cultural clothingstyle, but only 37.0 percent signified that IFP was compatible with their lifestyle, clothingstyle (2.5%), personal lifestyle (6.0%), bodystyle (15.0%), colourstyle (11.0%), and fashion trend (8.5%). Again, its aesthetic finished value was rated low (71.5%). It is therefore recommended that youth should be trained on factors to be considered in fabric selections. More research work should also be done on how to improve the range of texture and colour of IFP.

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Table 1: Distribution of psycho-social characteristics of respondents N = 400

Psycho-social variables	Frequency	Percentage
- Sex :		
Male	164.0	41.0
Female	41.0	59.0
- Marital status:		
Single	344.0	86.0
Married	56.0	14.0
- Level of education:		
Students	204.0	51.0
Complete secondary school	96.0	24.0
Tertiary education	68.0	17.0
Dropped out	32.0	8.0
- Living status:		
Independent	116.0	29.0
Dependent	284.0	91.0
- Religion:		
Christian	236.0	59.0
Muslim	114.0	36.0
Traditionalist	20.0	5.0
- Rate of contact with the metropolis:		
Forthnightly	216.0	54.0
Monthly	60.0	15.0
Quarterly	124.0	31.0
- Monthly allowance:		
N1,000.0 – N2,000.0	248.0	62.0
N2,001.0 - N3,000.0	44.0	11.0
Above N3000.0	28.0	7.0
- Sources of information on fashion trends:		
Television	56.0	14.0
Other town	296.0	74.0
Peer group	384.0	96.0
Magazine	24.0	6.0

- Rate of attending ceremonies:		
Often	228.0	57.0
Rarely often	128.0	32.0
Very often	44.0	11.0
- Wardrobe size:		
15 -20	244.0	61.0
10 – 14	96.0	24.0
Less than 10	60.0	15.0
- Rate of changing wardrobe:		
3 month interval	42.0	10.5
6 month interval	108.0	27.0
Once in a year	132.0	33.0
3 years interval	120.0	30.0
- Amount spent on cloth per year:		
Less than N5,000.0	312.0	78.0
Above N5,000.0	88.0	22.0
- Level of knowledge on fabric selection:		
Low	366.0	91.5
Moderate	34.0	8.5
- Level of knowledge on IFP maintenance:		
Low	312.0	78.0
No knowledge at all	48.0	12.0
- Clothingstyle:		
Clinging light weight fabric	396.0	99.0
Stiff and standing fabric	36.0	9.0
- Colourstyle:		
Warm	292.0	73.0
Cool	108.0	27.0
- Parental occupation:		
Farmer	196.0	49.0
Trader	168.0	42.0
Civil worker	36.0	9.0
Politician	284.0	71.0
- Parental educational status:		
Literate	220.0	55.0
Illiterate	180.	45.0
- Owned bank account:		

- Access to cybercafé	116.0	29.0
- Access to handset/telephone	32.0	8.0
	264.0	66.0

Source: Field survey, 2007.

Table 2: Distribution of respondents by IFP serviceability
N = 400

Serviceability variables	Frequency	Percentage
Appearance – attraction – to- end - use	320.0	80.0
Appropriateness' of ;		
- colour – to – end – use	280.0	70.0
-texture – to – end – use	68.0	17.0
-crimps – to – end – use	84.0	21.0
-drape – to – end – use	36.0	9.0
-strength - to – end – use	364.0	91.0
-stretch/elasticity – to – end – use	2.0	0.5
Compatibility with;		
- culture	372.0	93.0
- lifestyle	388.0	97.0
- clothingstyle	10.0	2.5
- personalstyle	24.0	6.0
- bodystyle	60.0	15.0
- colourstyle	46.0	11.5
- fashion trends	34.0	8.5
- family status	92.0	23.0
- affordability	324.0	81.0
- ability to enhance identity	392.0	98.0
- high comfort value	216.0	54.0
- availability	172.0	43.0
- high absorption value	372.0	93.0

Source: Field survey, 2007.

Table 3: Distribution of the respondents by IFP performance.
N = 400

Performance variables	Frequency	Percentage
- Produces bad odour with sizing	400.0	100.0
- Shrink with care	400.0	100.0
- Easily attack by mildew and mold when sol and wet	388.0	97.0
- Good fire retardant	372.0	93.0
- Damage with use of bleach	354.0	88.0
- Poor fastness to sunlight and perspiration	400.0	100.0
- Fume fade with atmospheric gas	400.0	100.0
- Wrinkle resistance	0.0	0.0
- Ability to retain - look – with – use and care	0.0	0.0
- Bleeds in solvent	400.0	100.0
- Migrates with moisture	400.0	100.0
- Frosts and crocks with abrasion	400.0	100.0

Source: Field survey, 2007.

Table 4: Results of correlation analysis showing the relationship between IFP adoption and clothing needs among youths.

Variables	Correlation fficient (r)	Coefficient of determinant (r^2)
--age	0.261*	0.068
- marital status	0.244*	0.060
- education	0.115	0.013
- cosmopoliteness	-0.299*	0.089
- social participation	-0.381*	0.145
- access to information on fashion trends	-0.216*	0.045
- knowledge on fabric selection	0.197*	0.039
- family socio economic status	-0.198*	0.039
- attitude towards IFP	0.214*	0.046
- level of IFP awareness	0.336*	0.121
- texture appropriateness to end - use	0.224	0.050
- compatibility with clothingstyle	0.197*	0.039
- fit into lifestyle	0.376*	0.141
- fit into clothing style	0.393*	0.154

- aligned with personalstyle	0.259*	0.067
- fit into bodystyle	0.234*	0.055
- fit into colorstyle	0.228*	0.052
- align with fashion trends	0.341*	0.116
- enhanced identity	0.316*	0.010
- affordability	0.159	0.025
- maintenance value	0.199*	0.040
- availability	0.175	0.031
- hygienic value	0.247*	0.061
- aesthetic finish value	0.224*	0.050
- off shade	-0.259*	0.067
- smoothening performance	0.305*	0.093
- comfort value	0.397*	0.158

Source: Field of survey, 2007.
*Significant at P = 0.05; Critical value of r is 0.196.

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ANALYSIS OF REVIEW OF SEX AND HIV EDUCATION PROGRAMMES IN NIGERIA: FOCUS ON YOUNG PEOPLE AND IMPLICATIONS FOR YOUTH DEVELOPMENT

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Twenty studies that measure the impact of curriculum-based sex and HIV education programmes on sexual behaviour and mediating factors among youth under 25 years in Nigeria and implications for youth development were reviewed in this research. One-thirds of the programmes show improvement on sexual behaviours. The programmes do not hasten or increase sexual behaviour but, instead, some programmes delay or decrease sexual behaviours or increase condom or contraceptive use. Effective curricula commonly incorporated 17 characteristics that describe the curricula development; the goals, objectives and teaching strategies of the curricula themselves. Also, their implementation for sex education programmes that were effective across a wide variety of studies reviewed across cultures and groups of youth were included. Consequently, there is a need for approach to sexuality education that must be sensitive to cultural context; within which these notions are formed. This also, must be sustained among the youth in Nigeria, particularly in various local communities across the country. Replication of studies for emphasis also indicates that the programmes remain effective when implemented properly.

Keywords: Sex Education, HIV education, Sexual Behaviour, Effective Curricula, Youth Development.

INTRODUCTION

HIV/AIDS is wiping out the development gains of a generation as the most active labour force are being affected by HIV/AIDS. The epidemics is most common among people in productive age groups (15-49 years), resulting in a loss of agricultural labour.

UNAIDS & WHO update (2006) reported that the adult prevalence of HIV/AIDS rates in Nigeria is 5.9%, out of which 4.8% were prevalence among the age category 15-24 years of age. This translates into over 6 million Nigerian Youth as carriers of HIV/AIDS (using National Population Commission Census

2006 provisional results). The high prevalence in Nigeria cannot expect to gain any development momentum until the epidemic is brought under control (UNAIDS & WHO update, 2006). The death of breadwinner due to HIV/AIDS complications most often shifts the responsibility of household on the children. In most cases children turn to caregivers who have to give up working in the fields. Many towns and communities now have to cope with large number of children orphaned by HIV/AIDS, these children need to cope and survive.

As HIV/AIDS continues to ravage Sub-Saharan Africa (SSA); questions about its impact on the sexual behaviour and implication for youth development have become more pronounced recently. In addition to the suffering and mortality of those afflicted with the disease, other concerns include the consequences of adult AIDS-related deaths for young children who become orphans and for grandparents and other kin who bear the burdens of caring for both the dying and their dependents (Knodel, J.and M. Van-Landingham, 2000; Apata, 2003). Furthermore, because the virus most commonly strikes people in their peak productive and reproductive years, the economic consequences of effects are potentially profound (Population Reports, 2001, Apata *et al*; 2004,). Several factors are attributed to this phenomenon; such as the rates of several Sexually Transmitted Diseases (STDs) are on the increase (Annan, 2001, Apata, 2007).

In many of the SSA, there is increasing number of people delay marriage until they are older; they have also become more likely to have sex before marriage; thus premarital rates and some STD are on the increasing (Apata *et al*; 2004). For survival sake the young people tend to involve into a lot of income generating activities to meet up with this forced responsibility on them, these can either make or mar them. The problem of AIDS affects all aspects of the life of young people. They bear the greatest brunt of the disease and its spread

is most rapid among them. They are therefore at the centre of the epidemic (Ransome-Kuti, 1999). Throughout the world, many people view sex and HIV/STD education programs as a partial solution to these problems (Annan, 2001, Ransome-Kuti, 1999). Indeed, sex and HIV/STD education programs that are based on a written curriculum and that are implemented among groups of youth in school, clinic, or community settings are a promising type of intervention to reduce adolescent sexual risk behaviours. These programmes are often well-designed to be implemented in schools and youth centres, where they can potentially reach large numbers of youth, yet they can also be implemented in clinic and community settings where they can also reach other youth, including potentially higher risk youth who have dropped out of school or the parents/guardian cannot afford the school fees. There have been many previous reviews of sex and HIV education programmes' impact on behaviours, but they have typically limited on the effects, but they do not analyze in depth the characteristics of effective programs (Asagba, *et al* 1992, Society For Women and AIDS in Africa, Nigeria, 2004, UNESCO, 2003).

Consequently, this paper try to address two questions: What are the effects, if any, of curriculum-based sex and HIV education programmes on sexual risks behaviours, STD and pregnancy rates, and mediating factors such as knowledge and attitudes that affect those behaviours? What are the common characteristics of the curriculum-based programmes that were effective in changing sexual risk behaviours? To overcome those and other limitations, this paper review 20 studies of similar nomenclature and attempts to answer the above questions. In addition, the paper presents results for mediating factors, outcome behaviours after examining in depth the characteristics of effective programs that can change behaviours, as well as the challenges ahead.

METHODOLOGY

Classification of Appraisal studies

To be included in this review, each study had to: be a curriculum-and group-sex based or HIV education programme (as opposed to an intervention involving only spontaneous discussion, one-one interaction, or broad school, community or media awareness activities); and focus on adolescents or young adults ages 12-24 years.

Also, the research methodology had to: include a reasonably strong experimental or quasi-experimental design with both intervention and comparison groups and both pretest data collection; have a sample size of at least 100; measure programme impact upon one or more of the following sexual behaviours: initiation of sex, frequency of sex, or number of sexual partners; use of condoms or contraception more generally; composite measures of sexual risk (e.g., frequency of unprotected sex); pregnancy rates; birth rates; and STD rates; and measure impact on those behaviours that can change quickly (i.e., frequency of sex, number of sexual partners, use of condoms, use of contraception or sexual risk-taking) for at least 3 months, or measure impact on those behaviours or outcomes that change less quickly (i.e., initiation of sex, pregnancy rates, or STD rates) for at least 6 months.

The study reviewed had to be completed or published in 1990 or subsequently. Studies meeting these criteria were identified in several ways, including: searches from the Internets to supplement the local publications.

Analysis of study results

All identified studies meeting these criteria were reviewed and specific information from each study was summarized in one-page summary that included key data such as characteristics of the sample, research methods, and effects on both sexual risk behaviours and mediating factors (e.g., relevant knowledge and attitude).

All effects on behaviours or mediating factors were considered significant if:

They were statistically significant at $p < .05$ level and, this significance was based on either the total study population or a large subgroup that was roughly at least one third of the population.

Studies sometimes reported results for multiple measures of each behaviour, for different time periods, for different subpopulations, or for various combinations of the above. Thus, some studies reported one or a very small number of positive effects on behaviour but also reported a large majority of results that were not significant.

To avoid presenting only the positive results and to provide a more balanced overview of the results, the following rules for summarizing results were adopted.

- *Regarding different measures of the same outcome bahaviour.*

All measure across all studies was rank-ordered according to their probable impact on prevalence. For example, use of condoms over 12 months was ranked higher than was condom use at first sex. Only the results from the highest ranked measure reported in each study were included.

- *Regarding different time periods, and very short term effects on behaviours* would have had little impact on HIV prevalence, only those results for 3 months or 6 months (depending on the behaviours) or longer were included.
- *Regarding different sub samples*, the results had to describe a sub sample representing roughly one third of the sample or more (e.g., males or females) to be included.

Identification of characteristics of effective programmes

After analyzing the behavioral effects of the programme evaluated, a three-step process was used to identify the common characteristics of those programmes that were effective at changing behaviour.

First, to generate a comprehensive list of potentially important characteristics of programmes, we examined reviews of health education and HIV education programme for

young adults, and individual studies of sex and HIV education programmes for youth.

Second, to identify the common characteristics of curriculum content (as opposed to curriculum development and implementation) from among the 20 studies reviewed to figure out their effects. Fourteen of these studies had an impact on the strongest evidence for positive behavioural effects. These 17 curricula were then coded according to the risk and protective factors they addressed. Each of the over-all curriculums on each of the potentially important characteristics was given an in-depth review.

Third, to determine more accurately the characteristics of the process for developing and implementing the effective curricula (as opposed to the content of the curricula), we coded the original research articles and reviewed any other materials (e.g., the curricula themselves) that described how the curricula were developed and implemented. These descriptions became the basis for the five characteristics describing the development of the programme and the four characteristics describing the implementation of the programme (described below).

Although we coded the curricula and studies as objectively as we could our results necessarily had to reflect some degree of judgment, in part, because of the programme development, content, and implementation.

RESULTS AND DISCUSSION

The sections are divided into: characteristics of the studies reviewed, impact of programme on sexual risk behaviours and pregnancy and STD rates, impact of programme on mediating factors for sexual risk behaviours, and common characteristics of effective programme.

Characteristics of the studies reviewed

Nineteen studies met the inclusion criteria above (see appendix), for example, 43% focused on preventing only on HIV or STD, while 57% focused on preventing both HIV and STD. This greater

emphasis on HIV/STD undoubtedly reflects the worldwide concern about young adults contracting HIV and the funds and other resources devoted to reducing HIV/STD transmissions.

More than three fifths of the programme (65%) identified one or more theories that formed the basis for their programme, and often specified particular psychosocial mediating factors to be changed. Social learning theory and its sequel, social cognitive theory, formed the basis for more than half (58%) of the interventions. Related theories identifying some of the same mediating factors were mentioned by substantial percentages of other studies: theory of reasoned action (21%); health belief model (14%); theory of planned behaviour (12%); and the information, motivation, and behaviour skills model (8%).

Interventions included at least two different interactive activities designed to involve youth and help them to personalize the information (e.g., role playing, simulations of individual worksheets that applied lessons to their lives), this took about 85%.At least about 85% of the programmes trained their educators/enumerators before implemented curriculum activities. Some of the remaining 15% of the programmes may also have trained their educators/enumerators, but their respective reports or articles did not mention the training.

Consequently, only studies that addressed HIV/STD and were both curriculum-based and group-based were included; broad youth development programme or sex education programme that did not address HIV/STD at all were not included.

To evaluate programme impact, half (51%) of these studies employed an experimental design with random assignment of individual youth, classrooms of youth, or entire schools or communities, while the remaining half used a quasi-experimental design. To be included in this review, all quasi-experimental designs had to have both

intervention and comparison groups and both pretest and post-test data. About 77% of all the studies used a matched-cohort design in which they linked baseline and follow-up survey data, while the others (only 23%) used unmatched pre and post cross-sectional surveys.

To be included in this review, studies also had to measure behaviour for at least 3 months (or initiation of sex for at least 6 months). Just over half (61%) of the studies measured impact for 1-2 years, while 19% measured impact for 2 years or longer.

In aggregate, as the field is maturing, increasingly large percentages of studies have used experimental designs; have used cohort designs, measured long-term impact on behaviour. These changes as well as improvement in other areas (e.g., more rigorous and sophisticated statistical analyses) demonstrate that standards are becoming more rigorous. On the other hand, many of these studies had significant limitations such as limited explanation, weak evaluation designs, measurement issues, and statistical shortcomings.

Impact of programme on sexual risk behaviours and STD rates

All, but two of the 20 studies measured programme impact on one or more of six sexual behaviours: initiation of sex, frequency of sex, number of sexual partners, condom use, contraceptive use in general, and composite measures of sexual risk-taking, while few (42 %) reported STD rates.

Commencement of Sex

An important measure of sexual activity is timing of beginning of sex. The studies reviewed demonstrate that these programmes in general did not hasten the initiation of sex, and some delayed the instigation of sex. Of the 16 studies that measured impact on this behaviour, 10 (62.5%)found that the programmes significantly delayed the initiation of sex among one or more groups for at least 6 months, 4(25%) found no significant impact, and 6 (37.5%) found the programme hastened the initiation of sex.

Frequency of Sex

A second measure of sexual activity is .the frequency of sex during a specified period of time (e.g., 3 or 6 months prior to the survey). This measure includes whether or not respondents had sex at all during that period of time. Of the 17 studies that measured impact on frequency, 7 (41.2%) reduced the frequency, 4 (23.6%) found no significant change in frequency and 6 (35.3%) found increased frequency among any major groups at any point in time.

Number of Sexual partners

A third common measure of sexual activity is number of sexual partners during a specified period of time prior to the survey. This measure is especially important for STD transmission. Of 17 studies measuring this factor, 12 (70.6%) found a decrease in the number of sexual partners, while 3 (17.6%) found no significant impact, and 2 (11.8%) found a negative impact.

Condom use

Of the 18 studies measuring programme impact on condom use, almost half (47%) showed increased condom use; none found decreased condom use.

Contraceptive use in general

Of the 15 studies measuring impact, 6 (40%) showed increased contraceptive use, 6 (40%) showed no impact, and 3 showed decreased contraceptive use.

Sexual risk-taking

Some studies about 17 (85%) studies developed composite measures of sexual activity and condom use (e.g., frequency of sex without condom use (e.g., frequency of sex without condoms or number of unprotected sexual partners). Half of them found that the programme significantly reduced sexual risk-taking. None of them found increased sexual risk-taking.

STD rates

Of the 10 studies that measured impact on STD rates, 4 (40%) found positive impacts, 3 (30%) found no significant impact, and 3 (30%) found negative impacts.

Overall, these studies strongly indicate that these programmes were far more likely to have a

positive impact on behaviour than a negative impact. Across all 20 studies, two-thirds (65%) had a significant positive impact on one or more of these sexual behaviours or outcomes, while only 6% had a significant negative impact on one or more of these sexual behaviours or outcomes. Given the large number of tests of significance across all of these studies, some, but not all, of the positive and negative results undoubtedly occurred by chance. Given the large proportion of studies that found significant positive results, a few, but not all, probably occurred by chance. On the other hand, given that multiple coefficients that were examined in each study, the percentage of significant negative results that was found is roughly equal to or less than the number that is likely to have occurred by chance.

One-third (32.5%) of the programmes had a positive impact on two or more behaviours or outcomes. For example, awareness on abstinence on youth can reduce the number of sexual partners, increased condom use, and reduced unprotected sex (29). Intervention that can both reduced the number of sexual partners among boys and increased condom use among both boys and girls (24, 29, 30) these studies also reflected that it is possible both to reduce sexual behaviour and to increase condom or contraceptive use with the same programme.

These programmes were effective with both low-and middle-income youth, in both rural and urban areas, with girls and boys, with different age groups, and in school, clinic, and community settings. But this does not mean that the same programme was effective with all of these groups in all of these areas, but simply that different programme were effective with all of these groups in all of these areas.

About 8 (40%) studies focused only on abstinence, but none recorded a positive result. All the studies commonly emphasized both abstinence and condom or contraceptive use.

Replication of studies

A critically important question is whether or not a programme that has been found to be effective when designed, implemented, and evaluated by a well-funded and highly skilled research team, will subsequently be effective when implemented by others in other communities. These replications reveal that these curricula consistently had similar positive behavioural effects when they were replicated provided they have: all activities were implemented as designed; and they were implemented in the same type of setting and with similar populations of youth.

When many activities were omitted or the setting was changed (e.g., from voluntary Saturday programmes to required in-school programmes), the curricula were less likely to have a positive effect.

Impact of programmes on mediating factors for sexual risk behaviours

Although the review of the studies above provides strong evidence that some programmes had an impact on sexual risk behaviours, without the results of the mediating factors, it does not specify how or why these programmes had an impact. Those questions can be partially answered by examining programmematic on the meditating factor that programmes attempted to change in order to change behaviour.

Those factors that are lightly meet two criteria and therefore have stronger evidence that programmes can modify them are expressed below:

1. At least three programmes significantly improved them and
2. At least half of the studies that measured them found significant improvements

Of those programme that measured impact, most increased knowledge about HIV and STDs. Half of the 15 studies that measured impact on perceived HIV risk were effective at increasing this perceived risk. More than 58% of the many studies measuring impact on values and attitudes regarding any sexual topic were effective in

improving the measured values and attitudes. About 35% of the 19 studies that measured impact on perceived peer sexual behaviour and norms significantly improved these perceptions.

More than half of those studies that measured impact on self-efficacy to refuse unwanted sex improved that self-efficacy to use condoms. Nine of the 12 programmes increased motivation or intention to abstain from sex or restrict the number of sex partners, and 8 of 11 programmes increased intention to use condom. Seven of 10 programmes increased communication with parent or other adults about sex, condoms, or contraception.

In whole, the evidence was strong that many programmes had positive effects on relevant knowledge, awareness of risk, values and attitudes, self-efficacy, and intentions-the very factors specified by many psychosocial theories as being the determinants of behaviour. Furthermore, all of these factors have been demonstrated empirically to be related to their respective sexual behaviours (Makinwa-Adebusoye, 1992, Azuzu, 1994, Smith, 2000, Okonkwo & Obionu 2002, Slap, G.B & Lot; 2003, Izugbara, 2004, Society for Family Health, 2003; Ross & Ferguson, 2006). Thus, it appears highly likely that changes in these factors contributed to the changes in sexual risk-taking behaviours.

Characteristics of effective curricula

The in-depth analyses of effective programmes identified 17 characteristics that described these programmes and are presented in Table 1. Three types of evidence suggest that these characteristics may have contributed to the success of these programmers.

1. A large majority of the effective programmes shared most of these characteristics.
2. Programmes that incorporated these characteristics were more likely to change behaviour positively that programmes that did not incorporate many of these characteristic.
3. Several studies involved a comparison of the impact of skill-based curricula that incorporated

all (ore nearly all) of these characteristics with the impact of knowledge-based curricula that did not incorporate many of these characteristics. Consistently, the skill-based programmes were more effective at changing behaviour than were the knowledge-based programmes. Although, nearly all the effective curricula incorporated nearly all of the effective characteristics, and although curricula with nearly all of type characteristics were highly likely to be effective, having most of the 17 characteristics present in a curriculum did not ensure significant changes in reported behaviour. In addition, a few curricula that did not appear to incorporate all 17 characteristics nevertheless had a positive impact.

The report concludes with a series of programme and research recommendations. To cite a few examples of the latter, the authors urge that more rigorous studies-particularly those using randomized experimental designs -of promising programmes should be conducted in developing countries. Researchers should determine which mediating factors are most important across cultures and then measure these factors more consistently to foster easier comparison. In addition, the authors suggest, published results of evaluations should provide more complete descriptions of their programmes.

It should also be recognized that these characteristics of effective programmes are not the only factors that determine whether or not programmes will have an impact on behaviour. Other factors, such as the saliency of unintended pregnancy, HIV or other STDs and the existing knowledge, values, attitudes, and skills of young also have an impact. Thus, for example, if HIV is very salient issue in a community and youth in that community lack basic information about how HIV is transmitted, the chances of infection during unprotected sex and methods of protection could be high, then programmes that provide this basic information may have an impact on behaviour, even if they

do not incorporate all of the 17 characteristics.

The 17 characteristics can logically be divided into three categories, namely those describing: (1) the development of the curricula, (2) the overall design and teaching strategies of the curricula themselves, and (3) the implementation of the curricula. As noted above.

These characteristics can be used to assess and select curricula (Gugler, 1991, Asagba, *et al*; 1992, Ransome-Kuti, 1999, UNESCO, 2003, Society Foe Women and AIDS in Africa, Nigeria, 2004, Oppong &Agyei-mensah, 2004, Smith, 2004, Izugbara, 2004), to adapt or improve them and even to develop them from scratch. They can also be used to guide implementation.

Many of these studies had significant limitations. For example, few described their respective programmes adequately; none studied programmes for youth engaging in same sex behaviour; some had problems with implementation; a few had relatively weak quasi-experimental designs; an unknown number had measurement problems; many were statistically under powered; most did not adjust for multiple tests of significance; few measured impact on either STD or pregnancy rates; and still fewer measured impact on STD or pregnancy rates with biomarkers. And, of course, there are inherent publication biases that affect the publication of studies-researches that are more likely to try to publish articles if positive results support their theories and programmes and journals are more likely to accept articles for publication if results are positive. Fortunately, some of these biases counteract each other.

Despite these limitations, the evidence for the positive impact on behaviour of curriculum and group based sex and HIV education programmes for adolescents and young adults is quite strong and encouraging. Two thirds of the programmes had a significant positive on behaviour. Many either delayed or reduced sexual activity or

increased condom or contraceptive use of both. At least 10 interventions had long term behavioural effects lasting 2 or more years; some lasted for close to 3 or more years as long as the effects were measured. Most programmes also increased psychological mediating factors that are known to be related to sexual behaviour. These studies should help to explain how these programmes can be effective.

The evidence is also strong that these programmes in general did not have negative effects. In particular, they did not increase sexual behaviour, as some people have feared they might. Of the 16 studies that measured impact on initiation of sex, only six significantly hastened the initiation of sex. Given the large number of studies and tests of significance for that out come, that could have occurred by chance. The few others scattered negative findings among both abstinence only and comprehensive sex and HIV education programmes may also have occurred by chance. The evidence is dramatically stronger that these programmes had positive effects on sexual behaviour.

The effects of these programmes were quite robust. They were just as likely, if not more likely, to be effective in developed countries. They were effective in urban and rural areas, low and middle income communities, and school and community settings, with advantaged and disadvantaged youth, males and females, different racial and ethnic groups, younger and older youth, and sexually experienced and inexperienced youth. There is some indication that they were especially effective with youth who were most likely to engage in unprotected sex with multiple partners and thus were at highest risk of HIV, other STDs and pregnancy. Of course, the exact same programme was not implemented with all of these groups; rather programmes was not implemented with all of these groups; rather programmes were appropriately designed or tailored for some of these groups.

Robustness was also demonstrated by replication studies. When three programmes were replicated with fidelity in different locations throughout the studies reviewed, but in the same type of setting, the original positive effects were confirmed. This is very encouraging and suggests that effective programmes can remain effective when they are implemented by people in other communities.

Given that many programmes reduced sexual behaviour and/or also increased condom or contraceptive use, they logically would reduce both sexually transmitted disease and pregnancy. The results of the few studies that measured impact on STD or pregnancy, however, did not produce many significant positive effects. The lack of consistent positive effects may been caused, in part, by sample sizes that were too small, by other methodological limitations, by significant changes in behaviour that were too small or too short term to produce marked changes in STD or pregnancy, or possible failure to change those behaviours that have the strongest impact on STD or pregnancy rates.

Thus, while these problems alone cannot solve the problems of STD, HIV, and unintended pregnancy, many of them can change sexual and protective behaviours in desired directions and they can be an important component in larger more comprehensive initiatives.

These conclusions support several programatic and research conclusions:

- Communities should implement curriculum based sex and HIV education programmes, preferably those proven to be effective with similar populations or those incorporating the 17 characteristics of effective programmes.
- Because these programmes can reduce sexual risk taking by a modest amount, communities should not rely solely on these programmes to address problems of HIV, other STDs, and pregnancy, but should view them as an important component in a larger initiative

that can reduce sexual risk taking behaviour to some degree.

- More rigorous studies of promising programmes need to be conducted with groups at highest risk, because there are gaps in these areas in the existing literature.
- Sample sizes should be sufficiently large to have adequate statistical power for important statistical analyses, including those among subgroups. Studies that are substantially underpowered is unfair to their respective programmes and may mislead the field.
- Researchers should determine more rigorously which mediating factors have the greatest impact on behaviour in different cultures and which educational strategies and activities are most effective at changing these factors both across and within cultures. More generally, studies should try to assess which of the 17 characteristics are most important and what kinds of adaptations can be safety made without jeopardizing effectiveness.
- Researchers should always try to publish negative results, provided that the studies are well done, so that the literature does not become biased.
- Published results of evaluations should provide more complete descriptions of their programmes so that reviews can better assess their characteristics and understand why some programmes were effective and other were not.
- Formal meta-analyses of all of these studies should be conducted so that they can overcome some of the limitations of the individual studies (e.g. insufficient statistical power)

There is evidence that strong curriculum- and group-based sex and HIV education programmes for adolescents and young adults can have an impact on lowering risk behaviors. The findings from these studies indicated that there is a 100% awareness rates of HIV/AIDS among the youth. But the poor attitudes to precautionary measures portend a lot of dangers

for the country's efforts toward reducing/eradicating the HIV/AIDS epidemic. Just as importantly, however, there is no evidence to suggest that such programmes increase sexual behavior, as some have feared. This concern has been used as a reason not to provide sexual-prevention information to youth.

However, programmes targeting youth should be an important component of overall prevention strategies and behaviour modification. One of these alternatives is to give knowledge about sexuality to young people so that they can take responsibility for their actions. The majority of studies evaluated here were not among resource-poor settings. The development and evaluation of strong adolescent and young-adult interventions are needed, particularly in sub-Saharan Africa, where teen pregnancy rates are high and adolescent girls are becoming HIV-infected. Allowing them to live and act in sexual ignorance is destructive to them and society. Educational programmes need to be coupled with youth-friendly services providing access to STD treatment, condoms, family planning, counseling, and HIV testing. Prevention is most successful when treatment and services are also available.

CHALLENGES AHEAD

It is highly pathetic that though there is generally high level of awareness of HIV/AIDS among the population, there is a very low level of response in terms of behavioural change.

Most of the data used in the studies reviewed were predominantly estimates and opinions. This puts to question the reliability and validity of the findings and the interpretations thereof. There is, therefore, a dire need for a factual assessment of the status and scope of HIV/AIDS in Nigeria.

More than 80% of the studies and responses against HIV/AIDS in Nigeria to date were sponsored by bilateral and international agencies like USAID, UNICEF, UNESCO, DFID, UNAIDS, WHO, e.t.c. This ought to change

if we must get better results in our fight against HIV/AIDS.

Little or no infusion of family life education and HIV/AIDS issues into the school curricula at the basic and secondary school levels and also, at the teacher training institutions in Nigeria. This type of model has been widely used effectively and successfully in developed countries and some part of East Africa.

The fight against HIV/AIDS also will require change in certain socio-cultural norms, values and practices that promote gender stereotype and a power imbalance between men and women in which change will not occur without strong support from and role modeling by community and national leaders.

The impact of HIV/AIDS epidemic on agricultural sector was sparsely addressed in the studies. There is clearly a yawning research gap in this sector as far as HIV/AIDS research is concerned.

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Appendix

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Table 1: Characteristics of effective curriculum based programmes.

PROCESS OF DEVELOPING THE CURRICULUM	CONTENTS OF THE CURRICULUM ITSELF	IMPLEMENTATION OF THE CURRICULUM
1. Involved multiple people with different backgrounds in theory, research and sex/HIV education to develop the curriculum.	***Curriculum Goals and Objectives*** 1. Focused on clear health goals-the prevention of STD/HIV and/or pregnancy.	1. Secured at least minimal support from appropriate authorities such as ministries of health, school districts or community organizations.
2. Assessed relevant needs and assets of target group	2. Focused narrowly on specific behaviours leading to these health goals (e.g., abstaining from sex or using condoms or other contraceptives), gave clear messages about these behaviours, and addressed situations that might lead to them and how to avoid them.	2. Selected educators with desired characteristics (whenever possible), trained them and provided monitoring, supervision and support.
3. Used a logic model approach to develop the curriculum that specified the health goals, the behaviours affecting those health goals, the risk and protective factors affecting those behaviours, and the activities addressing those risk and protective factors.	3. Addressed multiple sexual psychosocial risk and protective factors affecting sexual behaviours (e.g. knowledge, perceived risks, values, attitudes, perceived norms, and self-efficacy)	3. If needed, implemented activities to recruit and retain youth and overcome barriers to their involvement, e.g., publicized the programme, offered food or obtained consent.

4. Designed activities consistent with community values and available resources (e.g., staff time, staff skills, facility space, and supplies) 5. Pilot-tested the programme	***Activities and Teaching Methodologies*** 4. Created a safe a social environment for youth to participate 5. Included multiple activities to change each of the targeted risk and protective factors. 6. Employed instructionally sound teaching methods that actively involved the participants, that helped participants personalize the information, and that were designed to change each group of risk and protective factors. 7. Employed activities, instructional methods and behavioural messages that were appropriate to the youth's culture, developmental age and sexual experience. 8. Covered topics in a logical sequence.	Implemented virtually all activities with reasonable fidelity.

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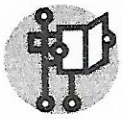

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DEVELOPING A CAREER IN AGRICULTURE BY THE SECONDARY SCHOOL STUDENTS IN OYO EAST AND WEST LOCAL GOVERNMENT AREAS OF OYO STATE

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In Nigeria, the bulk of food produce comes from the rural areas where majority of the farmers are made up of aged people and children. The death of these aged people and the migration of the youths from the rural areas to the urban cities will eventually make the farming population significantly low in meeting the food requirements of the community. Hence, the need to encourage the youth to develop a career or vocation in agriculture as a means of livelihoods. The objective of this study is to determine the perception of the secondary school students to Agriculture as a career in Oyo East and West Local Government Areas of Oyo State. Structured questionnaire was used to collect information from the final year senior secondary school students. (SSS3). 150 secondary school students were selected through random sampling in 5 schools. The results were analysed using descriptive statistics while standard deviation and Z score was used in separating the mean. The results showed that 62% of the respondents are willing and interested in developing a career out of agriculture as a subject. The standard deviation and Z score shows that there is no significant difference between the male and female students in their likeness for agriculture. However there is significant difference in preference of the students for chosen place for farming while 32.6% of the respondents preferred and can stay in rural areas, 67.4% dislikes rural areas due to under development and lack of social amenities. To encourage the youth to stay in the rural areas for farming activities, adequate transformation of the rural areas is essential. Young farmers club and association should be more functional in the primary and secondary schools.

Key words: Career, Agriculture, Secondary School, Students.

INTRODUCTION

The natural and human resources available in Nigeria if well utilized and managed should make the country a great nation. Also, the climatic endowment of the nation coupled with large cultivable area of land make Nigeria an agrarian nation. The ability of the nation to produce enough food to feed the teeming population depends on the quality of personnel in the business of food production. One of the characteristics of Nigeria agriculture is that it is made up of

peasant farmers that are advanced in age and cultivated fewer acres of land in subsistence level (Idachaba, 2004).

Agriculture in Nigeria is an ancient profession. In view of its importance in terms of source of food, raw materials to agro-allied industries, supply textiles, shelter, drugs and provision of income, it will continue to be relevant as long as man remains on the surface of the earth. One great beauty of agriculture as a profession is that it provides employment either directly or indirectly. Despite these advantages, many youth and younger generations' interest in farming are declining (Federal office of statistics 1996; and Adekunle *et al.*, 2007).

The declining interest in farm and farming among the youth is a function of many factors. These include the way and manner agricultural science is taught to the students. Olutu (1985) and Ibiyemi (2004) agreed that despite the fact that agricultural science was an important core subject in the Nigeria Junior Secondary, it was not a popular subject among learners. This is because some teachers erroneously use agriculture as a punishment and that punishment is almost always performed on the school farm. This makes learner develop a negative attitude toward the subject. Some of these negative attitudes are:

(i) Unwillingness to use their hands in weeding cultivating and performing other farming duties.

(ii) Stereotype feeling that agricultural science is for male students only.

The way and manner farming has been practiced has not given encouragement to the youth wanting to be called farmer. Use of local and hand held implements has made crop production highly labour intensive. The use of the locally fabricated hand tools thus, limits the area of land to be cultivated by a single farmer. There is also sociological problem of looking down on those who are farmers in the past due to their inability to make both ends meet. Lack of infrastructure in the rural areas has led to the drift of able body young men and women from

the rural areas to the cities in search of white collar jobs.

Furthermore, in a survey conducted by Olawoye (1993), it was discovered that many farmers perceived farming to be less rewarding now than in the past hence it may not be handed over to incoming generation. Old time farmer will either prefer their youth to pursue profession like medicine, accountancy, law, architecture, engineering rather than becoming a farmer. The aged farmers are dying, the population of farmers is decreasing at an increasing rate while the migration of the youth from farming activities to office jobs is increasing at an increasing rate. These call for serious concern if the nation must feed itself. Relying on food importation to feed the nation will no doubt not augur well for the nation's agricultural development and economy.

Youth and Agricultural Development

Adekola (2002) described the youth as group of young people whose ages falls between twenty five to sixty-five years. These category of individuals represent the active or work force of the nation. Moreover, Jibowo (1989) and Torimiro (1998) characterized youth as possessing, innovation proneness, minimal risk aversion, faster reaction to time, less fear of failure, less conservation, greater physical strength, faster rate of learning among others, which may be resourcefully applied to good agricultural production activities. If properly educated, and oriented, the youth can build and sustain the nation's social, economic and technological growth.

Agriculture is the production of crops and rearing of animals for man's uses. Ibiyemi (2004) viewed agriculture as an applied science. That is, it is the application of science in studying, understanding and solving problem of plant and animal production. It is a broad knowledge that embraces all the various vital courses in science among which are botany, zoology, chemistry, mathematics, physics, climatology, accountancy ,economics, engineering,

geography and animal health. The Federal Ministry of Agriculture and Water Resources and Rural Development (1985), noted that agriculture is the mainstay of the Nigerian economy with many assigned roles to perform in the course of the country's economic development.

The youths have a major role to play in the development of Nigeria agriculture. Nigeria's agriculture is not a profession for the aged but requires the services of the active members of the society in which the youth forms 90-95%. For instance, Anyaoku (2004) noted that Nigeria has a youth population of over 40 million with an outrageously high level of youth unemployment. One veritable tool of empowering the youth and reduce their unemployment is to train them in vocational agriculture, that is, developing a career or vocation in the field of agriculture. Vocational agricultural programme is designed to provide knowledge and practical skills in areas of agriculture such as crop production, animal husbandry, soil science, horticulture, agricultural economics and extension, fishery, forestry, wildlife, agricultural engineering and education.

The specific objectives of this paper are to determine the:
(i) Preference of the secondary school students to agriculture as a career.
(ii) Preference of the students in staying in the rural areas for farming activities.
(iii) Choice of discipline or areas of interest in the field of agriculture.

METHODOLOGY

The study was carried out in the ancient city of Oyo in the South-Western Nigeria. Two (2) local government areas was selected in the town. They are Oyo East and West Local government. The research was conducted through the use of structured questionnaire to elicit information from one hundred and fifty (150) senior secondary school students in 5 secondary school. The criteria for selected schools are years of establishment (10 years and above), geographical location within the town, high students

population, well equipped facilities for effective teaching and learning of agricultural science and availability of qualified teachers in the subject. In each school, 30 students were selected through random sampling for administration of questionnaire. Information collected were analyzed using descriptive statistics. Thus simple statistical tools such as frequency counts, percentages, standard deviation and mean were used to summarize the data while Z score correlations were used to make deductions.

The selected secondary schools were Federal Girls College, Olivet Baptist High School, SPED International Secondary School, NESTO College and Model Secondary School all in Oyo.

RESULTS AND DISCUSSION

Data presented in Table 1 showed that there were more female students all together than the male counterpart. This might be as a result of one of the schools being a female school only. The choice of career by student is supposed to be based on proper guidance and counseling. It is on this basis that the Ministry of Education either at state or Federal level mandated the establishment of guidance and counseling unit in order to assist students discover their talents/gift for meaningful future career. The result of this study indicated that most of the respondents (64%) have gone through the counseling unit in arriving at their chosen subjects. However 36.0% of the student did not received any counseling.

From this study, most of the respondent (62%) showed willingness to make career in agricultural science while 35% of the students are not interested in pursuing any discipline in the subject after their secondary education. Analysis of the influence of sex indicated that more male students are interested in developing career/vocation in agriculture compared to the female counterpart. Table 2 revealed that 23.3 percent of female students is not willing to pursue agriculture as a career. Based on this finding, agriculture is mostly regarded as a man's profession by female students.

Table 3 indicated the reasons why some of the respondents shows dislike for farming and pursuing career in agric science. The reasons are based on the characteristic nature of farming profession. They included very risky and unpredictable nature of farming, labour intensiveness and low profit on the short run. Other reason include negative sociological attitude attached to the name "Farmer". Among those who showed their willingness to pursue career in agriculture, the study revealed that majority (63.4%) of the respondents are determined to set-up personal farm and be self-employed.

If these youths are well developed and motivated, the findings in this study indicated that there is hope for the nation as the aged peasant farmers are leaving the stage, younger generation might take over from them. While majority of the respondents shows interest in setting up their own farms and be self employed, however more than half of the respondents (67.4%) prefer to stay in the urban city for farming rather than stay in the rural areas. This is an indication that most of the youth will rather migrate from the rural areas to the urban cities.

CONCLUSION

The need to encourage the youth in developing a meaningful career in agriculture can not be over emphasized in ensuring sustainable food production. From this research, it is encouraging to discover that large proportion of our youth (respondents) are very much interested in pursuing or making career in agriculture. For this to be achieved, it will however need effective counseling, motivation and support of these youth. The following measures are thus recommended:

1. Students should be properly guided and counseled in the choice of career. This should be based on interest and natural endowment of the Student.
2. Development of personal interest and attitude in agriculture.
3. There is need to develop the rural areas as a catalyst in motivating the youth to stay and farm in the rural areas through provision of social amenities such as electricity, good pipe

borne water, good road and communication network, etc will go a long way in reducing rural-urban migration.

4. Proper pricing for agricultural products that will make farmers have profit for their efforts.

5. Creating farm settlement schemes for the youth.

6. Making young farmers Club and Association functional in both primary and secondary schools for motivation and stimulation of students' interest in agriculture.

It is hope that if the above measures can be properly implemented; many youth will have a good perception of agriculture as an area to develop future career or vocation.

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Table 1: Distribution of respondents by sex and exposure to counseling of career

Variable	Frequency	Percentage
Sex		
Male	71	47.3
Female	79	52.7
Counselling for choice of Career		
Yes	96	64.0
No	54	36.0

Source: Field survey, 2007

Table 2: Willingness of Students in Making Career in Agriculture and Place of farming

Variable	Frequency	Mean	Percentage	SD	Z Score
Willingness to Agric as Career					
Yes					
Male	47	9.4	31.3	8.1	
Female	46	9.2	30.7	5.1	0.21
No					
Male	22	4.5	14.67	2.31	0.71
Female	35	7.1	23.3	3.11	
Desired Place for Farming					
City	60	12.0	67.4	6.17	
Rural Areas	29	5.8	32.6	2.16	0.11

Source: Field Survey, 2007; SD: Standard deviation

Table3: Reasons for not having interest in Agriculture as a Career

Reasons	Frequency	Percentage
Agriculture is too difficult and hard to do.	10	17.5
Agriculture is very risky and unpredictable	12	21.1
Agriculture is not profitable on the short run	03	3.5
Do not like being call farmer.	03	5.3
Will not be fulfilled in life.	13	22.8
Two or more of the above reasons.	17	29.8

Source: Field survey, 2007

Table 4: Work intention of students willing to make career in agriculture after graduation

Work intention	Frequency	Percentage
Set up personal farm and be self employed.	59	63.4
Work in Government Ministry as Civil Servant	23	24.7
Work in private farms	01	01
Teaching of agric in schools.	07	7.5

Source: Field survey, 2007

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ADOPTION OF AGRICULTURAL INNOVATIONS BY WOMEN FARMERS IMPLICATIONS FOR CHILD DEVELOPMENT IN ENUGU STATE

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The overall purpose of this study was to determine the level of selected specific innovations by the Women-In-Agriculture contact farmers in Enugu State with a view to drawing the implication for child development. A structured interview-schedule administered to 240 women-in-agriculture contact farmers in 6 randomly selected blocks in the state, was the major instrument used for data collection. Descriptive statistics were used to summerise the data while factor analysis was used to make deductions. The results showed among others, that adoption levels for most of the innovations needed to be improved upon especially since, for some of the innovations that had a high level of unawareness. Factors hindering adoption included, land issues, finance, farm input supply, labour supply, marketing issues, extension issues and inadequate technologies. It is therefore recommended that a policy move be made that will infuse more efficiency into the extension system through the recruitment and training/retraining of extension agents as well as general review of those technologies and/or techniques rated by the women as inefficient and unsustainable. Also farm inputs should be made available to the farmers as and when due. Also, the women farmers should be encouraged to join co-operatives in order to reduce gender in-equity in farm input procurement and use, and even in agricultural land acquisition and use.

Keywords: Adoption, innovation, women, contact farmer, child development.

INTRODUCTION

In recent times in Nigeria, efforts have been made to incorporate women as an integral part of agricultural development. This derives from the fact that women provide some 60 to 80 percent of the agricultural labour force in Nigeria (Ngur, 1987; Akor, 1990; Blumberg and Okoro, 1991) and their input into agricultural related decision-making is believed to be substantial (Saito and Weidemann, 1990). Food and Agriculture Organization (FAO) in 1987 recommended the entrenchment of a special Women-in-Agriculture (WIA)

Programme in the Agriculture Development Projects (ADPs) in Nigeria to ensure adequate participation of women in agricultural extension programmes (Akpoko and Arokoyo, 1995). This resulted in the modification of the Extension System in the country to address the specific needs of this group of farmers, which has suffered neglect and denial of extension information services (Eicher and Baker, 1982).

In Enugu State, not much has been done in the evaluation of the WIA programme based on the clientele (WIA contact women farmers) view points as it relates to the programme being the vehicle for food security in the State in particular and Nigeria in general. This study therefore, sought to explore the extent to which the extension services of WIA programme transferred improved technology to the small-scale women farmers, who produce the bulk of the food consumed in the State. It also sought to explore if there are some institutional, farmer and agency-related constraints limiting the attainment of WIA's objectives in the State.

Adoption of innovation is a decision to make full use of a new idea as the best course of action available and involves a change in the orientation and behaviour of the farmer from the time she/he becomes aware of the new practice to its use. Today, it is conventional to talk of a seven stage adoption process viz. unawareness, awareness, interest, evaluation, trial, use and rejection.

The level of adoption of an innovation by an individual is influenced by personal, socio-cultural, economic and communication factors (Rogers and Shoemaker, 1971). Characteristics of an innovation also play a key role in its adoption by an individual (Ekong, 2003).

The foregoing therefore informs this study which was designed to investigated the adoption of agricultural innovations by WIA contact farmers in Enugu State with a view to drawing the implications for child development. Specifically it

established the levels of adoption of some selected agricultural innovations by Women in Agriculture contact farmers in Enugu State; identified the problems hindering adoption of innovations by the women contact farmers; and made some recommendations aimed at improving the level of adoption of innovations by the clientele; and the implication for child development.

METHODOLOGY

Women contact farmers of WIA in Enugu State were studied. A multistage sampling procedure was used to select the respondents from Enugu, Awgu and Nsukka which are the three ADP agricultural zones in the State.

At the first stage, two extension blocks Awugu Zone-8 blocks, Enugu Zone-6 blocks and Nsukka Zone-10 blocks were selected from each of the Zones. At the second stage, five farming Units (extension circles) were selected from each of the selected blocks to make up a total of 30 farming units. At the third stage eight women contact farmers were randomly selected from each of the selected farming units to make up a total of 240 respondents. However, only 220 interview-schedules were retrieved and found analyzable giving a response ratio of 91.67 percent.

Pre-tested and validated in interview-schedule, was used to collect information on demographic characteristics of the respondents' technology characteristics, among others. Descriptive statistics were used to summarize the data just as factor analysis was used to make deductions.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of the Respondents

Date in Table 1 show that majority (72.0%) of the respondents was married whilst 42.0 percent was within the age range of 36 and 45 years. This is encouraging since younger people are more likely to adopt improved technological practices (Akubuilo, 1982 and Lionberger, 1960).

Some (40.9%) of he respondents did not complete primary

education, while 14.6% never attended any formal schooling. This is disturbing because it is known that at least 8 years of formal education will enable a farmer to understand some key concepts of scientific agriculture. Majority (61.9%) f the respondents cultivate crops and keep livestock. This is acceptable and should be encouraged, as this is one sure way of diversification of risks.

Adoption of Selected Agricultural Practices

Data in Table 2 Show the adoption levels for the ten agricultural innovations presented to the women farmers. Unawareness was high for mechanized land preparation (36.7%), planting technique (35.1%), modern processing (37.4%) and fruit processing (26.1%). Some of these technologies are a bit complex and require sustained and extension teaching as well as motivation if successful adoption is to be achieved.

Data in Table 3 show the analysis of the effectiveness of the technologies/techniques extended to the contact women farmers for enhanced food production and food security using a 4-point Likert scale. Items that scored 2.5 (i.e. XS = 2.5) and above were rated as effective in production; while those that scored below 2.5 were regarded as not being effective in production. Results show that the most effective crop production technology were fertilizer (XS = 3.16), followed by cultural practice technique (XS = 3.05) in the order.

Data in Table 4 show that women farmers in assessing the problems that continue to hinder them from effective adoption of WIA innovations or increased food production identified issue of land acquisition and use (XS = 3.28), and the type and nature of technologies and techniques extended to them (XS = 3.28) as the most crucial issues that should be addressed. Other crucial issues include those of finance (XS = 3.18), farm input supply (XS = 3.16), labour supply problem (XS = 2.95), and poor extension services (XS = 2.78). The respondents did not, however, see

the issue of marketing of their farm produce as a crucial problem (XS = 2.35).

It can be inferred from this that the crucial problems to rural agricultural production may sometimes not include marketing but how to effectively produce.

Data in Table 5 addressed the factors hindering WIA contact farmers from adopting innovations. The identified issues were grouped for policy relevance. The three meaningful factors in order of importance were named as, marketing and finance, production resources and technical inputs and extension. Poor marketing and financing of production accounted for 45.9% of the issues and pointed to lack of market for farm and non-farm technology products (0.828), and lack of agricultural credit and poor finance (0.774). Farm production resources which accounted for about 29.8% of the issues limiting adoption of innovation, was defined mainly by scarcity and high cost of farm labour (0.923), and gender biased land acquisition and use problem (0.501). Labour scarcity, especially in the peak periods continues to be a major problem facing the women farmers in their attempt to adopt innovation. This is because most the agricultural technologies, especially the biological ones are sensitive of time of planting. Farmers can loose all the crops if planted late due to labour supply problem that affect timeliness of planting. Both Ezeh (1998) and Alimba (1999) identified gender disparity in land acquisition and use in the rural areas of South-Eastern Nigeria including Enugu State.

Factor one-technical inputs and extension issue-accounted for 18.5 percent of the issues limiting adoption of innovations by WIA women. This factor was dominated by costly and unavailability of farm inputs. (0.800). In Ghana, for example, Owusu-Baah (1995) similarly found that lack of farm inputs was a major frustration in accepting agricultural innovations. Complexity of technologies (0.693) was also identified as a variable that explains factor 1. Variable (V_6) faulty extension service (0.557) helps to explain

the problem of adoption which relates to poor extension services. The extension teaching methods used in reaching the farmers have been perceived as faulty and incapable of helping the farmers effectively understand the use of innovation.

Implications for Child Development

Adoption of various innovations by the women have varying degree of influences on their out put and income women one known to be contributive to the house hold income from which children's school fees, health bills, and feeding as well as sheltering and clothing are derived. Hence, removing constraints to the adoption of the innovations will in a way increase the household income and output, and subsequently influence the social development of their children.

CONCLUSION

Many developing economies have been searching for the most effective and sustainable ways of exploiting the potentials of rural women in agricultural production to feed their ever increasing population and ensure food security. Specifically, the issue borders on how to effectively transfer farm technologies/innovations to the farming women for enhanced food production and productivity. In Nigeria, the Women-In-Agriculture Programme (WIA) seems to be the appropriate vehicle for this, and has been designed to function through the state ADP extension systems. The findings of this study show that generally the adoption levels were not very encouraging. There was a high degree of unawareness for mechanized land preparation, planting technique, modern processing and fruit processing. Much have to be done to ensure successful adoption of innovations by the women contact farmers and indeed by other rural women farmers in the state. The fact that many of the so-called WIA contact farmers were not aware of most of the technological packages/technologies which extension agents claimed to have extended to them is an indictment of the efficiency of the extension

system. A policy move that will infuse more efficiency into the extension system through the recruitment and training/retraining of the extension agents, including high level monitoring of the agents extension activities, is needed.

Also, there should be a general review of those technologies and/or techniques rated by the women farmers as inefficient and unsustainable to critically examine those reasons adduced by them for the rejection. Again, modern agricultural technologies are based on heavy doses of farm inputs. Availability of needed inputs for specific agricultural technology is a necessary condition for accepting the technology.

Finally, Women-In-Agriculture Farmers should be encouraged to join the WIA farmers' co-operative societies. This could help in reducing gender inequity in farm input procurement and use; and even agricultural land acquisition and use by women.

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Table 1: Percentage Distribution of the Respondents by Personal and Socio-Economic Characteristics (N=220)

Variables frequency percentage characteristics	Frequency	Percentage
Age range		
24 years and below	12	5.0
25-30	86	36.0
36-45	101	42.0
46 and above	41	17.0
Marital Status		
Single	24	10.0
Married	173	72.0
Widowed	31	13.0
Divorced	12	5.0
Education Status		
No formal education	36	14.6
Primary incomplete	98	40.9
Primary complete	49	20.5
Secondary incomplete	43	17.7
Secondary/TTC complete	12	5.0
Post Secondary	3	1.3
Type of Farming Activities		
Crop production only	70	29.0
Animal production only	22	9.1
Both (crop and livestock)	158	61.9

Source: Field Survey, 2007

Table 2: Farmers Indicated Adoption Levels for Crop Production Techniques Exposed to WIA Contact Farmers Technology Adoption Stages

Innovations	Unaware	Aware	Interest	Evaluation	Trial	Use	Rejection
Mechanized land preparation	36.7	24.2	2.7	3.6	16.6	11.8	4.4
Planting technique	35.1	30.8	2.1	1.6	10.4	11.3	8.7
Mechanized harvesting	27.1	23.0	6.6	3.6	16.2	18.4	5.0
Modern Storage	22.2	37.9	4.5	1.2	10.5	13.2	10.5
Modern Processing (e.g. Soyabean)	37.4	22.7	4.8	1.8	14.5	10.0	8.8
Modern Marketing	22.2	37.9	4.5	1.2	10.5	13.6	10.2
Fruit Processing	26.1	22.4	1.6	2.1	16.9	8.9	22.0
Fertilizer application	2.9	32.5	3.4	2.6	12.0	37.9	8.7
Dry season vegetable Farming	25.8	25.0	2.6	1.9	15.6	10.4	11.7
Cultural Practice	5.6	12.8	0.5	2.8	14.1	57.8	6.4

Source: Field Survey, 2007

Table 3: Effectiveness Rating by Farmers of Crop Production Techniques Exposed to WIA Contact Farmers

Technology Item	RATING SCALES Very Effective	Effective	Ineffective	Very Ineffective	Mean Score (XS)
Land preparation	80(1.44)	60(.81)	42(.46)	38(.17)	2.80
Planting method	70(1.28)	62(.84)	50(.34)	38(.17)	2.75
Cultural practices	110(2.0)	53(.72)	37(.34)	20(.09)	3.15
Harvesting	90(1.6)	56(.75)	22(.12)	50(.23)	2.75
Storage	65(1.18)	43(.58)	36(.32)	76(.34)	2.43
Crop processing	87(.158)	66(.90)	48(.44)	19(.09)	3.10
Pest/Disease Control	65(1.18)	35(.48)	58(.53)	62(.28)	2.47
Fruit Processing/Preservation	76(.13)	82(.1.12)	38(.17)	24(.11)	2.70
Fertilizer Application	102	(1.85)	71(.96)	17(.08)	3.16
Dry season planting	88(1.60)	74(1.01)	40(.36)	18(.08)	3.02
Marketing	60(1.09)	48(.65)	68(.62)	44(.20)	2.56

Source: Field Survey, 2007;
Figures in parenthesis are the scores of individual issues.

Table 4: WIA Farmers Identified Problems that Continue to Hinder Adoption of Innovations.

	EXTENT OF EFFECTS				
Identified Problems	Great Extent	Some Extent	Little Extent	No Extent	Mean Score (XS)
Land issues	120(2.18)	60(.82)	229.20)	18(.08)	3.28
Finance	90(1.64)	85(1.16)	40(.36)	5(.62)	3.18
Farm input supply	102(1.85)	70(.95)	33(.30)	15(.07)	3.16
Labour	78(.143)	68(.93)	60(.54)	14(.07)	2.95
Marketing	40(0.73)	45(.61)	88(.80)	47(.21)	2.35
Extension services	68(1.24)	59(.80)	71(.64)	22(.10)	2.76
Type of technologies	110(2.0)	66(.90)	42(.38)	02(.01)	3.28

Source: Field Survey, 2007;
Figures in parenthesis are the scores of individual issues.

Table 5: Varimax Rotated Factor Matrix of Issues Hindering WIA Contact Farmers from Adopting Innovations

ISSUES	I	II	III
		FACTORS	
Issues	Technical inputs & Extension	Marketing & Finance	Production Resources
V_{01} Scarcity and gender biased issues	.453	.403	.501
V_{02} Inadequate Credit	0.52	.774	.112
V_{03} Farm inputs cost/unavailability	.800	.211	.080
V_{04} High farm cost and labour scarcity	.068	.187	.923
V_{05} Marketing of farm & non-farm product	.214	.828	.111
V_{06} Faulty extension service	.557	.428	.117
V_{07} Complexity of technologies	.693	.372	.014
% of explained variation	18.5	45.9	28.8

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DETERMINANTS OF INTENSITY OF AGRICULTURAL LABOUR USE BY GENDER IN RURAL HOUSEHOLDS OF IMO STATE, NIGERIA

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This study was designed to analysed the intensity of agricultural labour use by gender and its determinants in rural households of Imo State, Nigeria. Data were collected with structured questionnaire from 60 male and 60 female headed households, and analysed using means, frequency distribution, percentages and ordinary least squares multiple regression model. The amount of labour use per hectare was estimated at about 186.5 mandays and 203.7 mandays for male and female farmers respectively. Determinants of labour use intensity by gender were labour requirements for land preparation, type of tools used, timing of farm operations, length of fallow period, difference in income between farm and non-farm products, state of infrastructure and type of crop mix. There is need to develop labour saving technologies to achieve increased food crops outputs and farm income in Imo State.

Keywords: *Determinants, intensity, Labour, gender, rural household.*

INTRODUCTION

Imo State is predominantly an agricultural economy and about 75 percent of the population lives in the rural areas and obtains their livelihood from agriculture (Onajianya et al, 2003). Prior to the discovery of petroleum in commercial quantities the agricultural sector was contributing between 70 and 80 percent of the total value of the state's food need (FGN, 2001). However, over the years, the growth rate of agricultural production has either stagnated or failed to keep pace with the state's rapid population growth rate resulting in perennial food shortages and soaring food price (Onyenweal<u and Nwaru, 2005).

A lot of factors have contributed to the poor performance of the agricultural sector, but one of the major factors is the inadequate recognition given to the amount of labour input contributed by women farmers in food crops production. Given the domestic

duties of women gender division' of labour and differences in the access to land, finance, education and extension, the technological needs of women' farmers are in many ways distinct from those of men. One of the rural women's greatest needs is timesaving technologies which will lighten their excessive work loads and reduce the length of their working day; thereby reducing their labour use intensity. The absence of quantitative and qualitative data on labour use intensity by gender has contributed to the inadequate recognition and support for women's role in agricultural production and development (Rahman *et al* 2004; Rahman 2005).

Given that labour is a critical factor in agricult~ral production in Imo State, and the fact that farming is still largely labour intensive, any research worK that aims at a better understanding of the intensity of agricultural labour use by gender is justified. Also, to formulate appropriate and effective agricultural policies, there is need to keep abreast of changes in factors that influence intensity of agricultural labour use by gender.

Therefore, the objectives of this study are to; (1) identify the personal characteristics of respondents, (2) determine labour use intensity of gender and (3) estimate the determinants of labour use intensity by gender. It is hypothesised that labour use intensity by gender is positively related· to amount of labour required for land preparation, difference in income between farm and non-farm products, size of household labour force, state of infrastructure, type of crop mix and fallow length; and inversely related to distance of the farm to the household, capital input, type of tools used and timing of farm operations.

METHOLOGY

This study was conducted in Imo State, located in the south eastern zone of Nigeria. It had a population of about 2.485 million people in 1998 (NPC, 1998). The state is divided into 27 administrative units called Local Government Area (LGAs), which are grouped into 3 agricultural

zones of Owerri, Okigwe and Orlu. Agriculture is the major occupation of the people, and almost all the households farm either as primary or secondary occupation. The ecological zone of the state favours the growing of food crops, tree crops, and nuts. These crops are grown in smallholder farms usually in mixtures of at least two simultaneous crops: The major food crops grown are cassava, yam, maize and vegetables. Most farm households keep livestock such as goat, sheep, poultry, pigs and rabbits. Non-food producing activities are handicrafts, petty trade and food processing.

A multi-stage sampling technique was used in sample selection. The state was stratified into the three agricultural zones of Owerri, Okigwe and Oriu. From each zone, four rural local government areas (LGAs) were purposively selected, and from each LGA one rural community was randomly selected.

The sampling frame was the farming and Agricultural Development Project (ADP) labour records as documented in the "community listing" of Imo State (2002) and Agronomic Survey Report (2004) of the State ADP. From the list of rural farm households in each chosen community, five male and five female household heads contained in the farming and labour records of the State ADP, out of a range of between 120 and 170 farm households, were randomly selected giving a sample size of 120 rural farm households, composed of 60 male and 60 female headed households. The extension agents and community leaders assisted the investigators in identifying the respondents. Structured questionnaire and personal observation were used to collect data.

Data were collected from the respondents once every forth night through a cost-route approach between January and December 2006, so as to obtain accurate gender disaggregated farm level data. Data were collected on variables such as age, marital status, education, type of farming, farming experience,

household size, household capital, amount of labour use, labour required for land preparation, distance of the farm to the household, incomes from farm and non-farm products, state of infrastructure, type of tools used, type of crop mix, timing of farm operations and fallow length.

Data analysis involved the use of descriptive statistics such as means, frequencies and percentages, as well as inferential statistical tool such as Ordinary Least Squares (OLS) multiple regression analysis.

To estimate the determinants of intensity of agricultural labour use by gender, the estimated regression equation is implicitly expressed as follows:

$Y_i = f(x1, X2, X3, X4, X5, X6, Xl, X8, Xg, XlO, e)$

Where,

Y = Intensity of labour use (Amount of labour use in mandays per hectare).

I = 1 for male headed households and 2 for female headed households.

X_1 = amount of labour required for land preparation (manday per hectare)

X_2 = distance of the farm to the household (KM)

X_3 = difference in income between farm and non-farm products (Naira)

X_4 = capital input (Depreciated value of capital inputs In naira per household)

X_5 = size of labour force (No. of people)

X_6 = state of infrastructure (measured on a 3-point likert type scale or poor (1), moderate (2), and good (3)).

X_7 = type of tools used (dummy variable1 for modern, zero for crude)

X_8 = type of crop mix (measured on a 3-point likert type scale of mix based on yam and maize (1). mix based on cassava and yam (2), and mix based on yam, cassava and maize (3)).

X_9 = timing of farm operations (dummy variable, 1 for correct timing, zero otherwise)

X_{10} = length of fallow (years)

E = error term

It is expected a-priori that (X_1, X_3, X_5, X_6, X_8, X_{10}, > 0; (X_2, X_4, X_7, X_9, < 0)

RESULTS AND DISCUSSION

Personal characteristics of respondents:

Table 1 shows that majority (63.3%) of the male farmers fell within the age range of 41 - 51 years, while majority (60%) of the female farmers is within the age bracket of 30 - 40 years.

This means that majority of the household heads were .not advanced in age. Majority (71.7%) of the male farmers were married, while most (45%) of the female farmers were widowed. Majority (61.7%) of the male farmers and most (55%) of the female farmers obtained the first school leaving certificate. Many (71.7%) of the male farmers and 95% of the female farmers were full time farmers. Majority (65%) of the male farmers and 58.3% of the female farmers acquired 11 years and above experience in farming. Most (61.7%) of the male farmers and 50% of the female farmers had 9 people and above in their households. Majority (50%) of the male farmers had household capital of N5,100 - N100,OOO, while most (56.7%) of the female farmers had household capital of not more than N50,OOO.

Intensity of labour Use

The amount of labour use per hectare of cultivated area was estimated at about 186.5 and 203.7 mandays for male and female farmers respectively during the 2006 crop year. This implies that the females contribute more labour per hectare of cultivated area than the male. The coefficient of variation of this amount of labour across male and female headed households was about 73.3 percent and 81.5 percent. That is, the intensity of labour use varied from 785 to 294.5 mandays and 913.6 to 347.5 mandays per hectare across male and female headed households respectively.

This amount of labour use per hectare is high as expected in an area characterised by high population density, such as Imo State. This finding is in line with those of Lassiter (1992) and Dodge (1997) who reported that farmers spent 822 hours per hectare in the production of Sorghum in Eastern Burkina

Faso, and 568 hours per hectare in the production of maize in the Mumbwa area of Zambia. Mgbada and Ezeogu (2002), also found high labour used in rice production in Ebonyi South of Ebonyi State.

Determinants of Intensity of labour Use

To estimate the determinants of intensity of labour use, by gender, four functional forms of the ordinary least squares multiple regression equation applied to the survey data provided the results summarised in tables 2 and 3. The linear function gave the best fit having produced the highest values of R^2, and highest number of significant variables, and therefore it is used for further discussions. The regression equations show that the fit is good and the Statistic is highly significant at the 0.01 level. All the regression coefficients have the expected signs. The regression coefficients for amount of labour required for land preparation (X_1), type of tools used *(Xl)*, timing (X_g), and length of the fallow period (X_{10}) are significant at the 0.01 level, while the regression coefficients for Difference in Income (X_3), state of Infrastructure (X_6) and type of crop mix (X_a) are significant at 0,05 levels. These results suggest that these variables are important determinants of intensity of labour use by gender in Imo State, The multiple regression coefficients for amount of labour required for land preparation (Xl), size of labour force (X_s), and length of fallow (X_{10}) are positive and significant at 0.01 level, while the coefficients for difference in income (X_3), state of infrastructure (X_6) and types of crop mix (X_a) are also positive but significant at 0,05 level, implying that increases in the magnitude of these variables lead to increases in intensity of labour use per hectare of cultivated area by male and female household heads in Imo State. The multiple regression coefficients for distance of the farm to the household (X_2), type of tools used *(Xl)* and timing of farm operations (X_g) are negative and significant at 0,01 level, suggesting that increases in the magnitude of these variables lead to reduction in intensity of labour use per

hectare of cultivated area by male and female household heads in Imo State. Therefore, the hypothesis is hereby accepted since the variables have the hypothesised positive and negative signs.

CONCLUSION

Labour use intensity by male and female farmers was found to be determined by amount of labour required for land preparation, type of tools used, timing of farm operations, length of fallow period, difference in income between farm and non-farm products, state of infrastructure and type of crop mix, There is need for policy actions to develop labour saving technologies, improve the state of infrastructure and develop the agricultural products markets if rural farm households in Imo State are to increase their labour input to agriculture, Increased labour input to agriculture will lead to increased food crops output and farm income in Imo State.

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Table 1: Personal characteristics of respondents (n = 60 males and 60 females)

Variables	Male		Female	
	frequency	%	frequency	%
Age:				
30 - 40 years	9	15.0	36	60.0
41 - 51 years	3.8	63.3	19	31.7
52 years and above	13	21.7	5	8.3
Marital Status:				
Married	43	71.7	24	40.0
Divorced	4	6.7	9	
widowed	13	21.6	27	45.0
Education:				
No formal education	6	10.0	19	31.7
FSLC	27	61.7	33	55.0
WASC	12	20.0	7	11.7
OND/HND/B.Sc.	5	8.3	1	1.6
Type of farming:				
Full time	43	71.7	57	95.0
Part time	17	28.3	3	5.0
Farming experience:				
3-6 years	4	6.7	6	10.0
7 -10 years	17	28.3	19	31.7
11 years and above	39	65.0	35	58.3
Household size:				
1 - 4 people	5	8.3	7	11.7
5 - 8 people	18	30.0	23	38.3
9 people and above	37	61.7	30	50.0
Household capital:				
50,000 naira	27	45.0	34	56.7
51,000 - 100,000 naira	30	50.0	25	41.7
101,000 naira and above	3	5.0	1	1.6

Source: Survey data, 2006

Table 2: Multiple regression results for the determinants of intensity of labour use per hectare of cultivated area by male household heads in Imo State, 2006.

Explanatory variables and important statistics	Functional forms			
	Linear	Semi-log	Double-log	Exponential
Intercept	10.623 (3.295)**	2.052 (2.041)*	1.093 (2.473)*	2.648 (2.005)*
X_1	1.073 (2.984)**	0.294 (1.903)	0.009 (1.034)	0.126 (0.725)
X_2	-0.489 (-3.258)**	-1.025 (-2.224)*	0.002 (1.293)	0.026 (1.094)
X_3	0.669 (2.468)*	0.0025 (1.039)	0.015 (1.643)	0.128 (1.256)
X_4	-0.57 -1.205)	-0.064 (-1.678)	-0.228 (1.004)	-0.497 (-1.542)
X_5	1.207 (2.646)**	0.528 (2.425)*	0.066 (2.094)**	0.017 (2.043)*
X_6	4.659 (2.048)*	0.509 (1.227)	0.027 (1.304)	0.011 (1.348)
X_7	-3.425 (-3.228) **	-0.625 (-3.066)**	-0.048 (-0.229)	-0.129 (-1.222)
X_8	2.939 (2.009) *	1.298 (1.243)	0.007 (0.926)	0.027 (1.055)
X_9	-7.508 (-3.619) **	-1.078 (-0.425)	-0.018 (-1.997) *	-0.201 (-1.294)
X_{10}	2.663 (2.965) **	0.229 (3.643) **	0.006 (1.243)	0.129 (1.394)
R^2	0.824	0.492	0.218	0.198
F	51.032**	10.557**	3.039**	2.691**
N	120	120	120	120

The figures in parenthesis are t-values
*t – values significant at 0.05 level
** and F – values significant 0.01 level
Source: Summarised from computer output, 2006

Table 3: Multiple regression results for the determinants of intensity of labour use per hectare of cultivated area by female household heads in Imo State, 2006.

Explanatory variables and important statistics	Functional forms			
	Linear	**Semi-log**	**Double-log**	**Exponential**
Intercept	8.213 (3.614) **	4.715 (2982) **	5.029 (2.743) **	3.617 (2.666) **
X_1	2.103 (2.976) **	1.622 (2.366) *	0.071 (2.022) *	0.006 (2.059) *
X_2	-1.841 (-3.376) *	-1.037 (-1.344)	-0.043 (-0.965)	-0.009 (-0.1007)
X_3	2.094 (2.094) *	-1.037 (-1.344)	-0.043 (-0.965)	0.007 (2.414)*
X_4	-1.994 (-1.605)	-1.021 (-1.112)	-0.052 (-1.073)	-0.005 (-1.168)
X_5	2.922 (3.407) **	2.013 (2.227) *	0.164 (1.318) **	0.008 (2.119) **
X_6	1.776 (2.437) *	1.103 (0.914)	0.016 (1.313)	0.004 (1.027)
X_7	-3715 (-3.102) **	-2.118 (-1.817)	-0.061 (-2.019) *	-0.009 (-1.666)
X_8	2.815 (2.441) *	1.602 (1.031)	0.088 (1.087)	0.003 (1.215)
X_9	-4.093 (-3.655) **	-1.997 (-1.629)	-0.216 (-1.233)	-0.007 (-1.071)
X_{10}	3.693 (2.998) **	1.842 (2.413) *	0.097 (2.513) *	0.009 (2.337)
R^2	0.927	0.402	7.298	3.448
F	62.223	3.294	7.289	3.448
N	60	60	60	60

The figures in parenthesis are t-values
*t – values significant at 0.05 level
** and F – values significant 0.01 level
Source: Summarised from computer output, 2006

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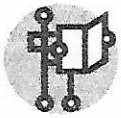

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PERCEIVED BENEFITS OF OUT OF SCHOOL AGRICULTURAL YOUTH EMPOWERMENT PROGRAMME OF OSUN STATE AND ITS IMPLICATIONS FOR POLICY FORMULATION.

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The study was designed to asses the benefits derived from training by participants in the Agricultural Youth Empowerment Programme of Osun State (OSSAYEP). Primarily, data were collected from 150 participants using systematic sampling technique from the nine farm centers located in the state. The data were analysed using descriptive statistics and paired sample T-test. Results of analysis indicated that mean age of participant was 28years with mean household size of 3. The mean year of formal education was 13years. Results of T-test analysis showed that there were significant difference at $p \leq 0.05$ in gender perception of participants in acquisition of skills in the use of pesticides ($T = 4.70$); spraying of herbicides ($T = 6.30$); tractorization ($T=3.20$); storage of agricultural products ($T=2.50$), and fish farming ($T=3.20$). About 27% of the participants showed a favorable attitude towards the programme. None of the participants showed a non favorable attitude. In conclusion, agricultural policy effort should be directed towards empowering youth's school leavers in modern farm techniques and reactivation of farm settlement scheme.

Key Words: Perceived Benefit, Youth, Empowerment, Policy Formulation

INTRODUCTION

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, especially those that require back bending for a long time in some farming operations. Studies have shown that this group of people owns a less percentage of farms than the aged (Farinde, 1991, 1995, Adesoji 2002). Most children and youth acquire non formal agricultural training through socialization process when they followed their wards to farm (Ajayi, 2002). The policy of education in southern part of Nigeria in 1950s became a regional programme of compulsory primary school education. This led to urban-rural migration in search of higher schools and Universities in urban

areas. This policy led to rapid expansion in formal training, which resulted in large number of unemployment of school leavers and graduates. It is the unemployment problem that led to major policy reform in education system, the 6-3-3-4 (*6 years of primary education, 3 years of junior secondary, 3 years of senior secondary and 4 years of higher education) as against 6-5-2-3 (6 years of primary education, 5 years of secondary, 2 years of higher school, and 3 years of tertiary education) system which was inherited from the colonial government. The new educational system placed more emphasis on practical skill acquisition than theory. Among the objectives of the new educational system are to ensure the use of brain and hand and tailor education towards rational needs and provide job opportunities for the young school leavers. However, it seems the policy was not well implemented and from observation, it is obvious that there is no difference between the products of the former and the latter educational systems (Adeyemo and Alayande, 2002). The technical training that was designed to care for the vocational potentials of youth that cannot be promoted due to poor performance at junior secondary school examination to senior secondary school level was not provided. The ill-implemented of the 6-3-3-4 system of education worsens the unemployment problem with unskilled youth population on the increase.

Adeyemi and Alayande (2002) reported that some schemes in Nigeria embarked on farm settlement schemes particularly in the western and eastern parts of the country in the 1960s. They reported further that most of the farm settlement schemes have been abandoned due to high operational costs and capital intensity. Regardless of the efforts of the federal government to curb youth unemployment and urban-rural migration, the economic recession of the early 1980s prompted some state government to employ immediate measures through agriculture to curb unemployment as youth unemployment continued to increase. Some of the measures

adopted by the state governments include:

- Imo state farm programme
- Lagos state graduate farming scheme
- Oyo state integrated self-employment scheme
- River state school to land programme. (Adeyemi and Alayande, 2001).

Many of the above measures were mere attempts without any appreciable impact. In order to arrest youth unemployment and the attached social menace, Osun state government approved the commencement of youth empowerment programme through agriculture in 2003. The programme was tagged "Osun state Agricultural Youth Empowerment Programme" (OSSAYEP) 2004. The programme was planned to benefit 1,200 young school leavers (male and female), yearly. The programme was also designed to assist the participants with farmland, farm inputs and credit facilities (OSSAYEP 2004). The programme was aimed at providing:

- Gainful employment for young school leavers
- Raising school leaver to replace ageing farming population.
- increased food production to feed the increasing population
- raw materials for the sustenance of agro-allied industries, and
- complete eradication of youth rural-urban drift in the state/

Osun state government embarked on this programme to harness her immense agricultural resources for the effective development of the youth both in the rural and urban settings as well as make them self employed, self-reliance and self-sustaining through involvement in agricultural sector of the economy. The first phase involves training in practical agricultural activities tagged "Agricultural Development unit" Application forms were made available to young school leavers, (male and female) in each of the 30 local government areas (LGAs) of the state. About 50 participants were recruited in each of the LGAs. Each participant enjoyed a stipend of ₦3,500 monthly and 40% of the farm produce shared among the participants. The second phase

would provide a loan of about ₦250,000 to each of the serious participants (those who attended and finished the training given) to settle them for farming activities. Male and female were treated equally in the programme.

The roles women play in agriculture vary from region to region and from country to country. FAO (1990) showed that in Sub-Sahara Africa women contribute 60% of the labour in both food productions for household consumption and for sale. They also play a major part in tedious works such as sowing, weeding, fertilizer ad pesticide application, threshing and food processing (processing of gari, palm oil, fufu, and ogi, transportation and marketing. In development, women contribute a major contributor, most especially in the less developed countries where agricultural production is carried out by the rural dwellers of which women remain a major labour source (Azikwe, 1992; Ajala, 2002). It was against this background that this study sought to assess the benefit derived by participants of Osun State Agricultural Empowerment Programme. The study therefore focused on the following specific objectives, to: identify the socio-economic characteristics of the participants; determine gender participation of the participants of OSSAYEP; and determine the benefits enjoyed by the participants of the programme.

Hypotheses

The hypotheses were set in a null form that:

H_{o1}: There is no significant difference between the benefits derived by male and female participants from OSSAYEP training.

H_{o2}: There is no significant difference between the attitude of male and female participants in OSSAYEP programme.

METHODOLOGY

The study was carried out in Osun State. All the nine farm centers were used for the study. A farm center was located in each senatorial district of the state. The centers were located at Kelebe (Osogbo), Ila Orangun, Ede, Ile Ogbo, Wasimi, Ilerin (Ilesa), Esaodo, Akeredolu (Ile-Ife) and

Oyan. Equal number of males and females were systematically sampled by picking every 5th participant on the list of participants from the nine farm centers (Sirkin, 1995). A farm center has between 3 and 5 Local Government areas. A total of 150 participants (75 males and 75 females) were selected and interviewed using structured questionnaire.

Benefits derived from the specific areas of training were identified and subjected to 4 ratio scale rating of never (O); rarely (1); often (2); and always (3). Both male and female responses were subjected to paired sample T – test to know significant difference between male and female responses among the selected training. Also attitude of the participants towards the programme was measured with the use of 16 attitudinal statements on a 5 point scale of strongly agree (5), agree (4), undecided (3), disagree (2), and strongly disagree (1). Responses of all the participants were used to calculate the percentage of responses under each rating scale. Respondents were categorized into three using grand mean + and – standard deviation. Respondents with mean in the category of mean + standard deviation had favourable attitude while those within mean – standard deviation had unfavourable attitude. Responses that fall between the two categories had a neutral attitude. Data were summarised using descriptive statistics such as mean, percentages, and standard deviation while sample t-test, and Analysis of Variance (ANOVA) were used to make deduction.

RESULTS AND DISCUSSION

Data in Table 1 showed that the mean age of participants was 27.8 years with standard deviation of 4.38. About 53% of the participants were married. Mean household size was 3.0 with standard deviation of 1.29. The smallness in household size was due to the age of the participants. It seems many youth get married late because they do not get job of their choice in good time. Majority, (73.3%) of the participants had secondary school certificate, about 20% had Ordinary National Diploma or National Certificate in Education

(OND/NCE) and only 3.3% had Higher National Diploma (HND) / Bachelors degree. The level of formal education of participants seems very low, which probably influence their attitude towards the programme. About 70% of the participants have farming experience with majority (93.3%) in crop husbandry and only 3% in animal husbandry. Majority (83.3%) of those with farming experience did not obtain loan for their farming activities. Those that obtain loan got the loan either through cooperative societies or indigenous credit society called esusu. This shows the importance of some informal system of savings.

Attitude

Data in Table 2 showed that the participants had positive attitude towards the youth Empowerment programme of the state. More than 90% strongly accepted the fact that "the programme was meant to increase food production in the state". This statement has the highest mean score of 4.90.This is followed by mean score of 4.84 (statement 12) that agricultural loan will be paid back as at when due. Another statement with a very high mean score 4.68 was if the programme "was meant to empower youth for the future" (statement 8). The statement that participants "enjoy the agricultural training" has a mean score of 4.59. Other statements with very high mean score (4.46) was the statement that "the programme was meant to provide job for the youth". Among the statement with very low scores was "I am not interested in farming (neither crop nor animal husbandry)" with mean score of 1.46.Another statement with very low mean score (1.65) was the statement that says "I am only interested in the loan and not in farming".

Detailed analysis showed that about 27% of the participants have a favorable attitude towards the programme. None of the participants have unfavorable attitude while about 73% have a neutral attitude. From the result of ANOVA in Table 4 there was no significant difference in the attitude of male and female participants towards OSSAYEP (F=1.474).

Results of sample t – test analysis

Data in Table 3 showed that there were significant differences between perceived benefits derived by male and female participants of OSSAYEP in the following areas at $P \leq 0.05$: cassava production (T= 3.9); rabbit production (T=4.76); fish farming (3.20); and use of pesticides (T=4.70); other areas of significant difference include spraying of chemicals (T=6.30); tractorization (T=4.70); and storage processes (T=2.50). It could be inferred from the above that male participants might have benefited more than the female participants because the identified technical areas of difference above are traditionally perceived as men major areas of operation in Agricultural production in the study area.

Data in Table 4 showed that there was no significant difference at $P \leq 0.05$ between mean attitude of male and female participants of OSSAYEP. This shows clearly that both the male and female participants are equally interested in the programme.

CONCLUSION

The mean age was about 28years; there is a significance difference in the benefits derived from training in cassava production, rabbit production, fish farming, use of herbicides and spraying of agro-chemicals, tractorization and storage processes. Also, there was a significant relationship between gender and cassava production, vegetable production and marketing of farm produce. However, there was significant difference between the mean attitude of male and female participants towards the programme.

The following recommendations are made based on the above findings

- Female sex should be more encouraged in the programme by making the recruitment into the programme gender balance.
- Experienced extension officers should be involved in training the participants.
- Participants with many numbers of years of schooling should be involved in poultry and fishery training.

The programme should be more encouraged among young school leavers by not allowing their morale to be dampened.

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Table 1: Socio-economic characteristics of participants of youth empowerment programme (N=150).

Variable	Freq.	%	Mean	Standard deviation
Age			27.8	4.38
Year of education			12.48	1.2
Educational level				
JSS	5	3.33		
SSC	110	73.33		
OND/NCE	30	20.0		
HND/B.Sc	5	3.33		
Sex				
Male	90	60		
Female	60	40		
Obtain loan				
Yes	25	16.5		
No	125	83.3		

Source: Field survey, 2007.

Table 2: Attitude of participants towards youth empowerment programme (N=150)

	SA %	A%	U%	D%	SD%	Mean
1. The programme was meant to engage used during the political campaigns.	3.5	6.25	6.0	31.2	40.6	3.5
2. The programme was meant to provide job for the youth.	75.0	9.37	15.6	0.00	0.00	4.46
3. The programme was meant to keep those youth to be used in future political campaigns	12.5	18.75	28.1	3.1	37.5	2.65
4. The programme was meant to discourage many youth from seeking white collar job	43.75	9.35	12.5	9.37	25.0	
5. I enjoyed the agricultural training, am exposed to; it is adequate to establish my farm.	43.75	21.87	0.00	0.00	6.25	4.59

6. The programme was meant to increase food production in the state.	90.6	9.37	0.00	0.00	0.00	4.90
7. I will prefer to take farming as a primary occupation	50.0	43.75	3.12	3.12	0.00	4.40
8. The programme is meant to empower youth for the future.	0.00	0.00	21.87	3.12	75.0	1.46
9. I am not interested in farming (neither crop nor animal husbandry)	0.00	0.00	21.87	3.12	75.0	1.46
10. I am only interested in the loan and not farming.	3.12	3.12	18.75	6.25	68.75	1.65
11. I am not interested in farming (neither crop nor animal husbandry)	0.00	0.00	21.87	25.0	50.0	1.81
12. I am only interested in the loan and not farming.	3.12	3.12	18.75	6.25	68.75	1.65
13. If given agricultural loan, I will use it for other business but I will pay back.	0.00	0.00	21.87	25.0	50.0	1.81
14. If given agricultural loan, I will use it for farming and pay back.	93.75	3.12	0.00	0.00	0.00	4.84

15. The government is wasting money by giving money to youth participant	6.25	0.00	18.75	15.62	59.37	1.78
16. The government is only using the participants as labourers.	0.00	0.00	28.12	18.75	53.12	1.75
17. Participants are well cared for in the programme.	40.6	0.00	0.00	37.50	9.37	3.37
18. I am not interested in farming (neither crop nor animal husbandry)	0.00	0.00	21.87	3.12	75.0	1.46
19. I am only interested in the loan and not farming.	3.12	3.12	18.75	6.25	68.75	1.65
20. If given agricultural loan, I will use it for other business but I will pay back.	0.00	0.00	21.87	25.0	50.0	1.81
21. If given agricultural loan, I will use it for farming and pay back.	93.75	3.12	0.00	0.00	3.12	4.84
22. The government is wasting money by giving money to youth participant	6.25	0.00	18.75	15.62	59.37	1.78

23. The government is only using the participants as labourers.	0.00	0.00	28.12	18.75	53.12	1.75
24. Participants are well cared for in the programme.	40.6	0.00	0.00	37.50	9.37	3.37
25. The farm managers are not competent for the training.	9.37	3.12	12.5	3.12	71.84	1.75

Source : Field survey, 2007.

Table 3: Perceived benefits derived from training by participant of youth Empowerment programme (N=150)

Aspect of training	Never	Rarely	Often	Always	'Mean' Male	'Mean' Female	'T'
1. Maize production.	2	20	38	40	1.9	2.0	0.82
2. cassava production	3	11	72	14	2.0	1.5	3.9*
3. vegetable production	3	7	8.5	4	2.5	2.4	0.79
4. Rabbit production	5	22	54	3	1.8	2.4	4.76*
5. Poultry production	1	15	64	10	2.0	2.2	1.60
6. Fish farming	13	10	48	15	2.4	2.0	3.20*
7. Marketing of farm produce	17	7	40	29	1.1	2.4	0.30
8. Fertilizer application	5	2	76	11	2.1	1.9	1.50
9. Use of pesticides	2	5	54	18	2.0	1.4	4.70*
10. Spraying of agro-chemicals	8	5	48	24	2.2	1.6	6.30*
11. Tractorization	0	13	68	14	2.4	1.6	4.70*
12. Storage processes	4	12	66	13	1.9	1.2	2.50*

Source: Field survey, 2007. * Significant at P≤0.05;
Critical value at T= + 1.96

Table 4: one way ANOVA shows differences between the mean attitude of male and female participants of OSSAYEP.

Source	Sum of squares	df	Mean square	F	Decision
1.Between	0.023	1	0.23		
2. Within	3.75	24	0.156	1.474	NS
Total	3.98				

Source: Field source, 2007. Critical value of F= 4.30 at 0.05

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PARTICIPATION OF RURAL IN-SCHOOL YOUTH IN AGRICULTURAL ACTIVITIES FOR OCCUPATIONAL POTENTIALS DEVELOPMENT: EMPIRICAL EVIDENCE FROM OGUN STATE, NIGERIA

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The youth played a very dynamic role in agricultural production as a major source of farm labour available to the farm families. Through their exposure to farming many had taken up farming as full time profession. This study investigated the participation of in-school youth in agricultural activities in Ogun State, Nigeria. A multi stage sampling procedure was used in selecting the 210 respondents involved in the study. Structured questionnaire was used in eliciting information from the respondents. Descriptive statistical techniques like frequency counts, and percentages were used to summarise the data. Spearman's Rank correlation as well as multiple regression were used to determine the relationships between the dependent and independent variables. The result showed that majority of the in-school youth were in the age bracket of 13 and 20 years. About 51.9 and 48.1 percents were male and female, respectively. While majority (86.2%) of the respondents participated in agricultural activities at a low level only about 7.1 and 6.7 percents highly and moderately participated, respectively. The result of multiple regression revealed that at $P \leq 0.05$ *significance level, there were positive and significant relationships between some of the participations' sociodemographics such as age (B = 2.482), cosmopolitiness (B = 7.123), occupation (B = 1.76) and household size (B = 9.643) and their level of participation in agricultural activities. Also, positive and significant relationships existed between some selected school-related variables such as year of establishment (r' = 0.67), available facilities used in teaching agriculture (r' = 0.48), school location (r' = 0.40) and the respondents' level of participation in agricultural activities. However, school population (r' = -0.382), type of school (r' = -0.42) had significant but inverse relationship with their level of participation in agricultural activities at* $P \leq 0.05$ *significance level. Among the recommendations made are provision of adequate land for schools, motivational incentives to schools (farm tools, farm inputs etc), parents to motivate and encourage the in-school youth towards participation in agricultural activities and that school authority and teachers should stop punishing erring students with agricultural activities, such as clearing of farm size, felling of trees, uprooting trees among others.*

Keywords: Participation, Rural, In-School Youth, Occupation, Development

INTRODUCTION

The place of agriculture in the economic development of a nation has come to be recognised

in recent years. A number of reasons have contributed to this recognition. Firstly, rapid population growth has focused attention on the need to increase and improve food production. Secondly, the success that has been achieved in obtaining increase in crop yield through the use of new agricultural technologies as well as improved practices, seeds and seedlings, chemicals and other facilities has helped in enhancing household food security in the nation. These had demonstrated that agriculture offers excellent investment opportunities. Thirdly, renewed interest in agricultural development has been accentuated by a degree of disillusionment with the outcome of industrial growth.

Our quest for self-sufficiency in food and fibre production is predicated on the revival of agricultural potentials (human, material, natural and financial resources). The moribund state of these potentials has resulted in food insecurity. Food insecurity in the land is evident in the short supply of food and fibre (plant and animal products and their by-products). It has also resulted in the geometric increase in the prices of agricultural products. The ever-increasing demand for food and fibre and other agricultural products in Nigeria most especially in urban centres has continued to increase. Attitude of youth to agriculture has also not helped matters. Worse still, field cultivation, planting and other faming activities in schools are being used as a mean of punishing erring students by school authorities and agricultural science teachers.

Moreover, in many schools, agricultural science teachers are made the labour masters, thus, clearing of bush, felling of trees, uprooting of root of trees cutting of bamboo, weeding among others are used as punishment for erring students in schools. This practice has impacted negatively on the minds of many student students and has pollrayed agriculture as a subject meant for punishment (Jibowo 1989).

The Nigerian educational system, prior to the formulation in 1979 of the New National Policy on Education (i.e. 6-3-3-4) experienced a bias against science courses, especially agricultural science which as at that time were offered by the students to enhance their number of credit at the school certificate examination and very few schools actually engaged its students in the practical aspects of agricultural education.

Though the in-school youth participation in agricultural activities is a ready made labour for the farm production in the household, agriculture has poor image, looked down upon by youth because it is seen to involve long hours of tedious physical work with poor income. People have negative impression about farming. It is often believed that nonentities or failures are the only ones that engage in such activities.

These are some of the reasons why youth have negative impression or no inclination towards farming activities. Therefore, as the strength and interest of the adult begin to wane, decline in agricultural production activities and food insecurity set in.

Therefore, in the continuing search for lasting solution to perennial food shortage in Nigeria, one approach is to alter the widespread misconception of Agriculture as a "Last resort" option for rural dwellers and those in retirement age bracket. To this end, an enlarged involvement in Agriculture of children and youth whose training emphasise practice and sustained interest in Scientific Agriculture was advocated. The National Policy on Education made the teaching and learning of Scientific Agriculture as a core subject at the junior secondary school level and "Agricultural science or any vocational subject" as one of the core subjects at the senior secondary level. The objectives of this as stated in the policy include to:

(i) stimulate and sustain students' interest in agriculture;

(ii) enable students acquire useful knowledge in agriculture;
(iii) develop agricultural skills in students;
(iv) enable students to integrate knowledge with skill in agriculture;
(v) expose students to opportunities in agriculture
(vi) prepare students for occupations in agriculture.

The inclusion of this policy in favour of practical experience was underscored by the provision which emphasizes that Agricultural Science should be taught as learning by doing, designed and intended to produce the skill students in agriculture. Emphasis was also placed on such facilities as suitably-qualified teachers, an adequate range and number of instructional aids, land and farm space. Others are farm structure and equipment that could enhance students' involvement in animal production especially small ruminants, poultry and rabbitary as well as establishment of horticultural gardens.

Almost three decades since the policy was been implemented and it graduate produced, the Nigerian food situations still appeared worse-off. The aging people in agriculture are declining in vigor, vitality and in mental alertness. These make it difficult for this category of individuals to comprehend the intricacies of new technologies designed to improve farming. Researches in Nigeria have shown that the farmers who are relatively old are more risk averse in adoption of innovations, and they take longer time, relative to younger counterparts in adopting new practices (Torimiro and Lawal, 1998).

Following this trend, the future of Nigerian farming should be invested in the children and youth. If youth must take over agriculture from the tender age, they need to be stimulated and be made more interested in it, they must be motivated and be equipped with the will and the resources to delve into it and cope with its drudgery.

The foregoing necessitated this study which investigated the participation of rural-in-school youth in agricultural activities in Ogun State, Nigeria. Specifically, it

(i) examined the participation of rural-in-school youth in agricultural activities in the study area;
(ii) determined their level of participation; and
(iii) determined the influence of school and parental variables on participation of rural in school youth in agricultural activities in the study area.

Hypotheses

(1) There is no significant relationship between school factors influencing participation of In-School-Youth and their participation in agriculture activities.
(2) The is no significant association between participation of In-School-Youth in agriculture activities their parent socio-economic characteristics.

Theoretical Issues

Participation could be defined as a concept of getting individuals in the community to be actively involved in those things that are to be liked, believed and understood by most people. "When an individual refuses to be part of such a venture, consciously or otherwise, he or she is directly working against things of the people and ultimately against his/her own good" (Adedoyin, 1999). Sonubi (1999) opined that popular participation as the name implies is the method of allowing every member of a community to play active part in the affairs that affect their lives.

Anyanwu and Agu (1996) indicated that there may be disparities in agreement as to the extent of the involvement of in-school youth in agricultural production, but there is consensus on in-school youth participation in all sub-sector of agriculture, namely crops, livestock, fisheries and agro-forestry, in developing countries of which Nigeria is one. Youth is a period in an individual's life, which starts between the end of childhood and entry into the

world of work. United Nations defined the youth as young men and women between the ages of 15-14 years (Ijere 1998). However, the definition of youth, according to age category may not satisfy the universal interest due to the variations in laws, customs, and constitution, but by implication, the youth in Nigeria may be categorized as young men and women between the ages of 13 and 30 years. Since the expected age of entry into secondary education or vocational apprenticeship training is 13 years that is the age of entry into the youth, while someone above the age of 30 years is not expected to participate in the National Youth Service Corps (N.Y.S.C.), a youth programme for the graduate from either universities or polytechnics (Torimiro, 1999). The youth constitutes a potent force in agricultural and rural development programmes. This category of people according to Ekong (2003), form a very significant proportion of the population of Nigeria. They include all categories of people with ages ranging from birth to 18 years. Such categories include infancy and early childhood (0-5years), childhood (6-12years), and adolescence (13-18years).

The United Nation Convention on the right of the child described individual between age 0-18 years as children. However, Children and Youth In Agriculture Programme (CYIAP) has adopted 0-18 years as the age for children based on the fact that the country recognizes people over 18 years of age as mature enough to vote and by voted for at elections. Also, using the dependency factor, most people of ages up to 18 years still depend on adults for their survival, protection, provision of basic needs and development. In the same vein, CYIAP has adopted a more elastic age range for, youth, which is 13-40 years, based on circumstances - poverty, unemployment and deprivation that are prevalent in Nigeria (Adedoyin, 2000). For the concept of youth to be well understood, Jibowo (1989) and Torimiro (1995) characterized youth as possessing: innovations

pruneness, minimal risk aversion, faster reaction to time. less fear of failure, less conservation, greater physical strength, social propensity, faster rate of learning, love for adventure and preference for boldness, and these culminate in the nature of youth in rural area, which way be resourcefully applied to good agricultural production activities.

However, Ijere (1998) noted that the potentials of this category of people are yet to be taped to a greater rural development advantage. Jibowo and Sotoni (1996) in their studies of rural youth in Odeda Local Government Area of Ogun State, a rural setting have found that the youth in rural areas equally possess similar agricultural production qualities possessed by the older people, but these are yet to be resourcefully integrated into rural and agricultural development programmes in Nigeria.

Youth represent the future and hope of every country. The high resources invested in young people today have both immediate and long-term benefits. Where they exist and are functioning well, rural youth programmes play an important role in capacity building like skills, of individual young people; strengthening families and communities and working towards sustainable agricultural and rural development as a major contributor to overall progress of a country (Bie, 1996). Although, rural youth often have little or few economic assets such as land and property, Alugo (1996) remarked that they have the time, energy and intelligence needed to learn and improve their knowledge and capabilities for positive change and development. Unlike adults, who may have fixed ideas, rural youth are generally highly flexible to adjust or adopt innovations for development. Youth also learn the skills, knowledge and aptitude (KAS) needed to cope with every day life. Enhancing these life skills, has a significant impact on the lives of young people, their families and communities. Positive youth development programmes aim to

provide an environment where youth become empowered through the acquisition and development of skills that explained their personal resources. It provides opportunities for moving youth towards mutually responsible and mutually rewarding involvement with others that constitute social maturity (Coleman, 1976). Young people are also helped to develop skill and fill roles that help them acquire the characteristics of adulthood as well as self-reliance through positive youth development. These characteristics include: a sense of competence-feeling that one can make a contribution and what is done is of value of other people; a sense of belonging a feeling that one has a place where one knows one belongs; a sense of power or potency-feeling that one can exercise some control over persons, organizations and institutions that control or try. To control one's live ,(Bird, *el al.* 1998). All these virtues are good and relevant potentials for effective participation in agricultural production activities.

In a variety of relationship, young people have final meaning in experiences through interaction with other people's ideas and thinking. Youth development provides young people with a learning environment in which they interact with a wide range of people across age from young and old to peers. It also provides for young people to interact with people of varied experiences. The variety of relationships that young people are exposed to provide opportunities for modeling and observational learning (Gobeli, 1996). Young people are Vulnerable to positive influences and in particular look to adult and older youth for role models. The context for learning is a social cell or relationship, which include the attitudes and behaviour of both the adult and young person (Ekong, 2003) that contributes to development.

Moreover, on the study of youth relationship, Gobeli found that young people have opportunities to draw conclusions and make connections in relationships through exposure to ideas, role

models and new ways of looking at things that may be different from their own. Adult/youth relationship provides an opportunity for caring, trusting relationship between youth and adult. This relationship can be characterized by situational leaderships provide opportunities for a wide variety and range of adult/youth relationships.

However, the development of youth competence and confidence over a period of time means that youth initiative increases and adult directions decreases and youth become empowered as resource to their community. An environment that is child centered provides opportunities for young people to acquire the skills that expand personal competence and confidence which are based on the personal competence and confidence which are based on the personal characteristics, trait, needs and interests of each young person. Social role taking or youth participation, according to Gobeli (1996) provides a balance between self-fulfillment and service and includes a range of interaction between adult and youth. Youth take on social role in their communities contributing to the well being of others. Youth development activities provide supportive environment that other realistic expectation of young people.

They provide a structure that enable young people to initiate, choose and discover from a variety of options to be involved in every issues from family to community. This supportive environment provides opportunities for young people to be accepted and integrated into the organization and community as resources. They have an opportunity to tryout different roles and other adult activities in a safe and supportive environment. Young people also serve their communities and are seen as capable, significant and that they can achieve.

Arokoyo and Auta (1992) considered youth as people who have the age maturity but have not yet acquired the full right and duties of adult life. Like marriage and earning a livelihood both for

one and for one's family.

They further stressed that youth are people who are still in school, who have neither started work nor set up their homes. Rural youth are very vital but untapped abundant resources that need to be harnessed if there is going to be any meaningful level of development in the rural area. Since according to Ijere (1998) youth constitutes 55% of Nigeria population and a well coordinated programme that channels their energy in a productive way will yield positive benefits to the nation. However, it is worthy to note that several constraints are militating against youth participation in agricultural activities. Therefore, efforts should be geared at devising appropriate strategies at removing these constraints. By so doing, rural youth will be made to take up agricultural activities for their career and livelihood.

METHODOLOGY

The study was conducted among in-school rural youth of ages between 12 and 24 years in Ogun State, Nigeria. A multi-stage sampling procedure was used in selecting the 210 respondents involved in the study. One Local Government Area was randomly selected from each of the four (4) Administrative zones in the state i.e. Ilaro Yewa zone, Ijebu North from Ijebu Zone, Sagamu from Remo Zone and fo from Egbo Zone. The total number of secondary schools in the selected Local Government Area was 56. Ilaro has 13, [fo has 9, Ijebu North has 18 while Sagamu has 16 secondary schools.

Twenty percent of the total number of secondary school in the selected Local Government Area were selected. Therefore from Ilaro 3, Ifo 2, Ijebu North 4, and Sagamu 3. The choice of the school was purposive i.e. based on their rurality. The total number of secondary schools involved in the study was 12 with total population of students at 54,206. Five percent were proportionately selected that gave 210 senior secondary schools students that were involved in the study.

Measurement of variables

Participation of in-school youth in agricultural activities was the dependent variable of the study. This refers to the extent to which the in-school youth participate in a number of specified agricultural production activities. The dependent variable, which was the participation in agricultural activities was measured against a four (4) point participation scale namely, seldom participation (1), occasional participation (2) regular participation (3) and very regularly participate (4). Each of the agricultural activities was scored one (1) point. An activity that was done more than five times a week was regarded as very regular, between 4 to 5 as regular, 2 to 3 as occasionally and about once a week as seldomly. Possible maximum score that a respondent can have was 4 and were calculated by multiplying the number of the agricultural production activities, which was thirty-five (35) by the higher point of the participation scale which was four (4).

Therefore, a respondent who did not carry out any of the activities mentioned score zero while a respondent who carried out all the activities very regularly have have a maximum scored of 140. The level of activities carried out was determined by grouping the respondents into three using their scores, their means score with their standard deviation. This was based on the assumption that the level of activities carried out obeys the law of normal distribution.

This was in line with the followings:

Mean +SD = High level

Mean +SD = low level

Difference between High and Low = Medium Level.

The higher level was perceived by respondents with mean activity score plus one standard deviation and above. Medium level was perceived by respondents with scores in between the high and the low level of activity. Low level is perceived by respondents with activity mean score minus one standard deviation score.

RESULTS AND DISCUSSION

Participation in land preparation and plating operation

Data in Table I indicate that 17.1 and 21.4 percents of the respondents participated in transplanting of seedling regularly and very regularly. Also 12.4 and 19.5 percents participated in seed dressing regularly and very regularly while 22.9 percent and 16.2 percent participated seldomly and occasionally. In addition, 1 1.9 and 14.3 percents participated in planting of seeds/seedling seldomly and occasionally. This was so because planting was done once for a crop and other cultural operations relating to maintenance and management of the plot. The finding revealed that there is a general low percentage of participation in land preparation and planting operations by the respondents. These findings agree with Zhiri (1998) that identified that students (inschool youth) are not interested, creative and innovative in agriculture. Most of them would not want to soil their hands, perceived field work as dirty job and meant for punishing erring students.

Participation in animal production activities

Data in Table 3 show that 16.2 and 6.2 percents of the respondents participated in dressing of animal/carcasses regularly and very regularly while 15.2 and 9.6 percents participated in cleaning pen before animal arrival regularly and very regularly. In addition, 10.5 and 19.5 percents of the respondents participated in slaughtering of animals seldomly and occasionally.

In short, many of the respondents participated in animal production management activities seldomly and occasionally. Majority (62.9%, 61.9%, 60.5%) and (56.2%) of the respondents never participated in mating of farm animal, sexing of farm animal, transfer of animals from one pen to another and marketing, respectively. This was the true picture of schools visited in the study area where few schools had animal husbandry. Perhaps, agricultural science teachers concentrated more on practical

agronomy at the expense of practical animal science. Hence, there is the need for every school to establish the keeping or rearing of small ruminant or non-ruminant animals to improve or increase the level of participation of in-school youth.

Level of participation in agricultural activities

Data in Table 4 show that majority (86.2%) had low level of participation while 7.1 and 6.7 percents had high and medium levels of participation, respectively. Computed means score of participation was 40.74 with standard deviation of 25.43. This finding indicates that the participants did not participate in many of the essential activities relating to crop production. This could be as a result of the coercion applied on the students, thus, they only did what they were directed to do. This calls for need to motivate these youth to have genuine interest in agriculture in order take it up as a profession.

This finding also agreed with Ijere (1998) who observed that potentials of rural youth have not been explored and exploited to a great advantage in agricultural activities. Jibowo (1979) found that significant association existed between age, attitude to agriculture as a profession; family background and participation in agricultural activities of secondary school students in Ondo State. Failure by the three tiers of government to improve the level of participation of youth in agricultural activities may exacerbate household food insecurity. Data in Table 4 show that majority (57.6%) of the respondents were above 16 years, while 41.4 percent were between 13 and 16 years and only 1.0 percent were 12 years and below. Also Jibowo and Sotomi (1996) stated that youth who are between the ages of 12 - 24 years are creative, energetic and innovative are always ready for productive activities.

Test of Hypotheses

Ho1: There is no significant relationship between school factors influencing participation of in school youth and participation in agricultural

activities

Data presented in Table 5 revealed that year of establishment(r = 0.67), available facilities for teaching agriculture(r' = 48), and school location (r = 0.4) had positive and significant relationship with in-school youth's participation in agricultural activities at $P \leq 0.05$ level of significance while type of school(r' = -0.42) had significant but inverse relationship at $P \leq 0.05$ level of significance. The over all result showed that the school factors - year of establishment, available facilities for teaching agriculture and school location were significant at 5% probability level. Hence, the null hypothesis H_o was rejected and the alternative hypothesis was accepted.

In the case of size of school, it was not positively significant, while availability of Guidance and Counseling service and type of school were accepted that there is no significant relationship between size of school.

The co-efficient of determination (1'2 square) in Table 6 explained the amount of variations in the participation as brought about by each of the variables considered under it, hence, 14.60%, 46.96%, 20.33%, 13.31 %, 44.56% and 39.52% variation to school factors as size of school (population), year of establishment, type of school, (single/mixed), available facilities for teaching agriculture, school location and availability of guidance and counseling services to participation in agricultural activities.

Ho_1: There is no significant relationship between participation of in-school youth in agricultural activities and their parents' socio-economic haracteristics

The findings in Table 6 revealed that age, cosmopoliteness, occupation and household size have positive and significant relationship with participation of in-school youth in agricultural

activities with linear multiple regression.
$B_1 = 2.482$; $B_1 = 7.123$; $B_1 = 1.76$ and $B_1 = 9.643$ respectively while gender, membership in social organisation, educational level, and nativity had negative significant relationship of B_1 5.985; B 1 = -0.032; B 1 = -0.034 and $8_1 = 0.146$.

The overall result showed that of the selected parents characteristic of the in-school youth, age, cosmpoliteness, occupation and household size, and gender, membership in social organisation, educational level and nativity were significant at 5%. Considering that, the null hypothesis H_o was rejected. that there was significant relationship between the age, cosmopoliteness, occupation and household size and participation of in-school youth in agricultural activities, while gender, membership in social organisation, educational level and nativity were negatively significant.
In the case of religious affiliation, length of residency, farming experience and farm size on participation in agricultural activities were positive but not significant. In this understanding, the null hypothesis H_o was accepted that there is no significant relationship between religious affiliation, length of residency, farming experience and farm size.

The finding with regard to the positive and significant relationship between participation in agricultural activities and in-school youth parents characteristics participating in A. As support the finding of Zhiri (1998) who opined that societal, or parental occupation and social status has an important role to play in children or youth (in-school youth) participation in agricultural activities. That many parents will simply prefer their children to become medial Doctors, Lawyers, Engineers etc than becoming agriculturist/farmer or participating in agricultural activities.

The co-efficient of determination (r^2 square) in Table 7 explained

the amount of variations in the participation as brought about by each of the variables considered under it hence, 5.79%, 13.64%, 14.30%, 86.10%, 35.90%, 15.04%, -18.05%, -29.20%, 19.20, -58.80%, 21.11 %, -13AO%. Variation to in-school youth parent's age, gender, religion affiliation, cosmopoliteness, length of residency, occupation, membership in social organisation, fanning experience, farm size, educational level, household size and nativity to participation in agricultural activities respectively.

CONCLUSION

The youth constitute the future and hope of the country. They have been found to contribute immensely to Agricultural activities most especially in the rural communities. School related variables parental influence, peer group influence, environmental variable as well as personal factors are found to be related to rural in-school youth participation in agricultural activities. Although the level of participation of rural in-school youth is very low they could still be stimulated to take agricultural as their career considering their background.

It is therefore recommended that following: that stakeholders i.e. parent, teachers, school authorities should encourage, counsel and organize agricultural careers talks for in-school youth on the prospect, opportunities and vantage of choosing agriculture as a career. Government and NGOs to encourage youth to go in agriculture by giving scholarship, funding exhibitions and excursion/field trips to research institutes in the country to motivate and stimulate the youth..

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Table 1: Distribution of respondents by participation in land preparation and planting operations (N = 210)

Activities	Never		Seldomly		Occasionally		Regularly		Very regularly	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i. Clearing of farm site	87	41.4	34	16.2	47	22.4	26	12.4	16	7.6
ii. Felling of trees	86	41.0	23	11.0	38	18.0	39	18.6	24	11.4
iii. Controlled burning of farm land	113	53.8	27	12.9	21	10.0	31	14.8	18	8.5
iv. Stumping/uprooting root of trees	95	45.2	27	12.9	35	16.7	34	16.2	19	9.0
v. Making of ridges, heaps/mound	124	59.0	27	12.9	22	10.5	19	9.0	18	8.6
vi. Carrying of seeds/planting materials to the field	100	47.6	26	12.4	33	15.7	26	12.4	25	11.9
vii. Sowing of seed in the nursery bed	61	29.0	48	22.9	34	16.2	26	12.4	41	19.5
viii. Planting of seed/seedling/materials	98	46.7	25	11.9	30	14.3	26	12.4	31	14.7
ix. Transplanting of seeding	60	28.6	40	19.0	29	13.9	36	17.1	45	21.4

Table 2:Distribution of respondents by participation in post-planting activities, processing and marketing of produce (N = 210)

Activities	Never		Seldomly		Occasionally		Regularly		Very regularly	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i. Supplying	81	38.6	53	25.2	35	16.7	21	10.0	20	9.5
ii. Thinning	98	46.7	37	17.6	37	17.6	27	12.9	11	5.2
iii. Weeding	112	53.4	33	15.7	28	13.3	26	12.4	11	5.2
iv. Mulching	68	32.4	39	18.6	41	19.5	42	20.0	20	9.5
v. Fertilizer application	103	49.0	25	11.9	31	14.8	33	15.7	18	8.6
vi. Herbicides application	122	58.0	27	12.9	34	16.2	13	6.2	14	6.7
vii. Preparing compost	133	63.3	27	12.9	27	12.9	15	7.1	8	3.8
viii. Application of compost	117	55.7	37	17.8	27	12.8	13	6.2	15	7.5
ix. Cutting of staking materials	122	58.1	33	15.7	28	13.3	16	7.5	11	5.2
x. Staking/vine training	110	52.4	26	12.4	40	19.0	20	9.5	14	6.7
xi. Harvesting (green/dry)	127	60.5	25	11.9	28	13.3	23	11.0	7	3.3
xii. Processing and packaging	88	41.9	31	14.8	31	14.8	36	17.1	24	11.4
xiii. Storage and maintenance	77	36.7	34	16.2	39	18.6	36	17.1	24	11.4
xiv. Marketing of produce	83	39.5	48	22.9	24	11.4	34	16.2	21	10.0

Source: Field survey, 2005

Table 3: Distribution of respondents by participation in animal production activities (N = 210)

Activities	Never		Seldomly		Occasionally		Regularly		Very regularly	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Cleaning pen before animal arrival	99	47.1	30	14.3	29	13.8	32	15.2	20	9.6
Purchase and transportation of farm animals/feeds	115	54.8	23	11.0	41	19.5	12	5.7	19	9.0
Feeding of farm animals	116	55.2	27	12.9	37	17.6	20	9.5	10	4.8
Sanitation or cleaning of the pen	102	48.6	29	13.7	31	14.8	23	11.0	25	11.9
Collection and grading of eggs	97	46.7	28	13.3	33	15.7	33	15.7	19	9.1
Giving of water to farm animals	115	54.8	23	11.0	26	12.4	28	13.3	18	8.5
Slaughtering and dressing of animal	99	47.1	22	10.5	41	19.5	27	12.9	21	10.0
Dressing of farm animal/carcases	120	57.2	24	11.4	19	9.0	34	16.2	13	6.2
Marketing	118	56.2	28	13.3	26	12.4	25	11.9	13	6.2
Sexing of farm animals	130	61.9	33	15.8	16	7.6	19	9.0	12	5.7
Transfer of farm animal from one pen to another	127	60.5	26	12.4	30	14.3	17	8.0	10	4.8
Mating of farm animals	132	62.9	127	12.9	32	15.2	8	3.8	11	5.2

Source: Field survey, 2005

Table 4: Distribution of respondents by level of participation in agricultural activities (N = 210)

Participation	Frequency	Percentage
High (above 124)	15	7.1
Medium (68-124)	14	6.7
Low (< 86)	181	86.2
X = 40.74 (Actual)	1.319 (Group)	SD = 25.43 (.4672)

Source: Field survey, 2005

NOTES FOR CONTRIBUTORS

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