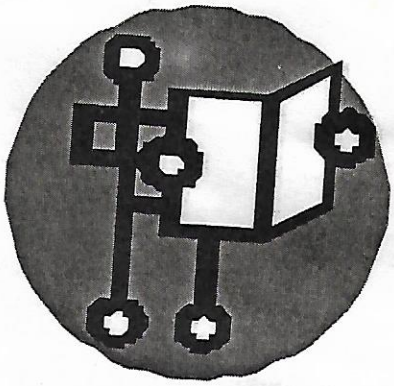
Annals of Child and Youth Studies



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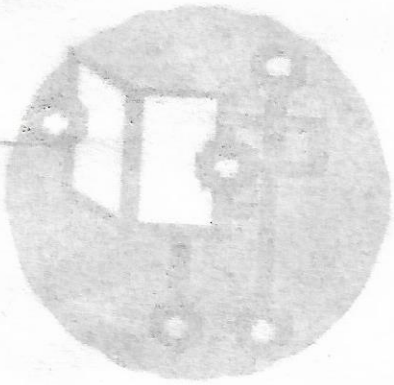

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BRIEF HISTORY OF THE JOURNAL

At the 7th Annual General Meeting of the National Research and Development Network of Children and Youth in Agriculture Programme (CYIAP-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, a Senior Lecturer in the Department of Agricultural Extension and Rural Sociology, 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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Annals of Child and Youth Studies,
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CYIAP-Network Publishing

IMPACT OF HOUSEHOLD FOOD SECURITY AND NUTRITION PROGRAMME ON THE NUTRITIONAL STATUS OF CHILDREN IN OYO STATE, NIGERIA

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The paper assessed the impact of Household Food Security and Nutrition Programme (HFSN) on the nutritional status of children (0-5years) in Oyo State, Nigeria. Data were collected from a total of 201 participants and 201 non-participants and their children. Participants were selected using systematic random sampling technique from each of the six Local Government Areas covered by the programme while non-participants were selected using simple random sampling technique. The result showed that women participants were aware of and utilized most of the recommendations except the improved livestock recommendation. The nutritional status of participants' children was better than that of the non-participants' children in terms of height for age, weight for height and weight for age indices. Based on the conclusion of the study, it is recommended that the incidence of malnutrition in children could be reduced through constant surveillance from the agricultural and health workers.

***Key words**: Household food security, nutritional status, children*

INTRODUCTION

Nigeria is still faced with the problem of equating the supply of food with the ever-increasing demand for it four decades after attaining her independence. Increasing malnutrition and household food insecurity are related human welfare problems heightened in the last few decades by economic recession (Akinyele, 1993). This led to poverty, which became real in many households with effects on women and children. These effects are visible in the living conditions of the people especially those residing in rural and peri-urban areas. Such conditions cause high levels of mortality and morbidity and spread of ill-health and malnutrition.

Malnutrition is a serious problem, causing morbidity and mortality among young children and women of childbearing age (FGN/UNICEF, 1991). It has also been recognized that malnutrition is a consequence of poverty and low food production, and it is also increasingly clear that poverty is one of the causes of malnutrition. About 200million children under the age of five, that is, about 40 percent of all children in the developing world, lack sufficient nutrition to lead full and

active lives (FGN/UNICEF, 1991). The Nigerian Demographic and Health Survey (FOS, 1992) showed that in 1990, 43 percent of Nigerian children under the age of five years were stunted, an indication of the prevalence of malnutrition and chronic household food security; while 36 percent were underweight and 9 percent wasted. Also, nutritional surveys conducted in Nigeria (Adelekan *et. al.* 1997; Abidoye and Ihebuzor, 2001) reveal high prevalence of malnutrition amongst the same group of children in Nigeria.

This problem of malnutrition had led to embarking on strategies of direct intervention in form of agricultural and rural development programmes to alleviate the problem. Notable among them is UNICEF/FGN intervention programme on household food security and nutrition. The aim of the programme is to increase the availability of staple foods throughout the year and also to promote the nutritional well-being of household members, especially women and children. UNICEF had recognized the fact that women are the driving force in achieving project effectiveness and reducing poverty and also the key to addressing the household food security and nutrition goals. The need to enhance food security and nutrition at the household level has led to the development of improved technologies in the area of farming, livestock production, time and labour saving devices, improved feeding practices and child care which are being promoted among households in Nigeria especially through nutritional education. To understand the present situation therefore, this study embarked on the assessment of the impact of the household food security and nutrition programme on the nutritional status of children in the study area.

Objectives of the study

The general objective of the paper was to assess the effect of household food security and nutrition programme on the nutritional status of the children in the study area.

The specific objectives were to:

1. identify the personal and household characteristics of women in the study area;
2. determine the child-related factors of children aged 0-5 in the study area;
3. determine the utilization of the various household food security and nutrition programmes' recommendations by the women;
4. assess the nutritional status of children (0-5 years) in the study area; and
5. assess the impact of the programme on the nutritional status of children.

METHODOLOGY

The study was carried out in Oyo State, in South Western Nigeria. The state is predominantly agrarian with about 70.0 percent rural population. The land area

covers a vast landmass of 32,249.1 square kilometers out of which 27,107.93km^2 is cultivable (OYSADEP, 2001).

The programme of intervention covered the four agricultural zones into which the state is divided (Ibadan/Ibarapa, Oyo, Ogbomoso and Saki). The programme, however, covered six local government areas (LGAs) in all the four zones. These LGAs were purposively selected for the study. Systematic sampling procedure with a random start was employed to select the sampled households from the list of participant households. For non-programme communities, non-participants were selected through random sampling technique from communities similar to the programme areas in ecology and socio-economic background. The main target in each selected household was a mother having at least one child below the age of six. The sample size of 201 participants and 201 non-participants were selected for the study.

Pre-tested structured interview schedule was used to collect information from women farmers on the personal, socio-economic, household-related characteristics, and utilization of improved recommendations introduced through the programme. Anthropometric measurements were taken for all the children. Height and weight of children of the respondents were measured using standard anthropometric techniques as described by WHO (1983). The data collected were analysed using Epi info (CDC, Atlanta), release 6.0 and Z-score was calculated and compared with WHO/NCHS reference data. The three indices of nutritional status used for the analysis were height-for age, weight-for height, and weight for-age. Frequencies, percentages and means were used to quantify the data generated while t-test was used to determine the significant difference between the nutritional status of children in the two groups selected for the study.

Measurement of variables

The nutritional status of children was measured using standard anthropometric techniques. Height, and weight were measured and relate to the age of the child and carried out following WHO guidelines and recommendations. The nutritional status was assessed by calculating Z score or standard deviation units from the median and comparing the result with International standards of the WHO/ National Centre for Health Statistics reference data.

The three indices of nutritional status used in the study include height-for age, weight-for age and weight-for height. Z-score less than -2 indicate malnutrition and children were classified as: stunted: height for age z-score <-2 representing a low height-for age.

Wasted: weight-for height z-score <-2 representing a low weight-for height

Underweight: weight-for age z-score <

-2 representing a low weight-for age.

Household food security status was conceptualized as the access to food at all times by members of the respondents' households. Respondents were required to indicate what best describe their household members access to food through out the year. This was ranked "have more than enough food to eat (5), have enough food to eat (4), sometimes do not have enough to eat (3), often, do not have enough to eat (2), never, have enough to eat (1). Respondents were also asked to indicate the number of days during the past 3 months of the survey that members of the household skipped at least one meal. Responses were grouped into never (scored 5), monthly (4), once in a week (3), three days in a week (2), daily (1). The maximum score for a respondent was 10 while the minimum was 2. The women were categorized into three classes of household food security status using the mean score and the standard deviation. Food secured (8 and above), moderately food secured (5-7) and food insecure (1-4).

RESULTS AND DISCUSSION

Personal and socio-economic characteristics of women farmers

The data in Table 1 reveal that more than half (51.5%) of participants and 47.0 percent of non-participants were between the age category of 30 and 39. The mean age of women participants was 35.79 while that of non-participants was 35.08. All the women farmers interviewed were married and the vast majority of them were currently living with their husbands. More than half of the participants (59.0%) and non-participants (53.4%) had between 5 and 8 children. This is an indication that farmers in the study area had relatively large number of children with whom they would readily augment their farm labour.

Forty-five percent of the participants spent between 1 and 6 years in school while 42.3 percent of non-participants spent same number of years in school. More than one-quarter (29.4%) and 52.0 percent of participants and non-participants respectively had no formal education. This shows a higher level of education among participants as compared with non-participants. Education may therefore have given the participants a higher propensity to participate in the programme directed towards improving the nutrition and health status of their children as well as agricultural development within the households. Farming was the major occupation of 42.7 percent of participants and 60.8 percent of non-participants (Table 1). The finding corroborates other findings (Siyanbola, 1995; Odebode and Akinbile, 2000) that rural women are actively involved in farming activities. The data on farm size show that 46.8 percent of participants and 54.7 percent of non-participants cultivated between 1 and 1.99 hectares of land (Table1). More than half (53.4%) of the participants and 48.2

percent of the non-participants had income of between N20, 001 and N40, 000 just as about 36.3 percent and 20 percent of participants and non-participants respectively, earned more than N40, 000 annually. The relatively poor financial status of most women farmers may however, discourage the use of innovations especially those, which are expensive to adopt. Majority (82.7% and 76.0%) of the participants were members of the religious societies and women groups, respectively. On the other hand, 52.7 percent and 8.1 percent of the non-participants were members of the religious and women groups, respectively. The belongingness of most participants to social organizations may have had positive impact on their willingness to accept change as a result of group influence.

Household characteristics of women farmers

The data on Table 2 show the household-related characteristics of women. The majority (68.1%) of the participants and 54.9 percent of the non-participants were first and only wife of the household head. However, 15.1 percent of the participants and 24.6 percent of the non-participants were household heads. Majority of the participants (71.6%) and non-participants (72.9%) had between 7 and 12 household members. The mean household size for the participants and non-participants was 8.31 and 8.58, respectively. This is in support of other findings indicating large household size of rural households (0jolo, 1995, Siyanbola, 1995 and Fasoranti, 1999). There was a slight difference in the years of schooling by household head between the two groups. Seventytwo percent of participants' household heads were literates and had attained primary, secondary or tertiary education, while a lesser percentage (56.1%) of the non-participants household heads were represented in the same category. The mean years of schooling were 7.09 and 4.21 for participants' and non-participants' household head, respectively. Improved level of education within a household is advantageous for encouraging people to bring about change.

Data in Table 2 further show that 33.0 percent and 31.0 percent of participants and non-participants sourced drinking water from dug wells. It is worth noting that none of the two groups had access to public tap. This has implications for child and family health, as access to clean and safe water may not have been met. Also, majority of participants (57%) and non-participants (79.9%) failed to treat their water before drinking. However, 8.7 percent and 2.3 percent of the participants and non-participants, respectively, boiled their water before drinking. A very small proportion of the households used the most sanitary means of human waste disposal. The bush was therefore, the most commonly used means among the non-participants (66.2%) while less than half (33.3%) of participants

resorted to the bush. FG/UNICEF(1994) and Maxiya-Dixon *et.al.* (2004) also revealed similar unhygienic conditions at the household level, which are pre-conditions for diarrhoea diseases in young children. Also, majority (60.5%) of the participants and 22.2 percent of the non-participants utilized health services on a regular basis. Household food security status of the respondents revealed that while 12.8 percent and 16.2 percent of the participants and the non-participants were food secure, 9.9 percent of participants and 56.4 percent of non-participants were food insecure. However, 77.2 percent of the participants and less than one-third (27.3%) of the non-participants were moderately food secure.

Child-related factors

The data in Table 3 show the child-related factors of participants and non-participants. More than one-third of the children in the two groups were in the age group of between 13 and 24 months (35.7% and 38.7% for participants and non-participants, respectively). Only 3.4 percent and 5.2 percent of the participants and non-participants had children between the age group of 49 and 60 months, respectively. The major diseases prevalent among children in the study area include malaria, diarrhoea and respiratory infections (cold and catarrh). Almost all the participants (97.1%) and non-participants (97.6%) indicated the occurrence of malaria in their children six weeks prior to the time of the survey. Fifty-eight percent of participants and 67.2 percent of non-participants' children had diarrhoea. Twenty-eight percent of the participants and 44.0 percent of the non-participants' children had respiratory infection six weeks prior to the survey. The result revealed that highest morbidity was more prevalent with the non-participants' children, which could be linked to their inaccessibility to health infrastructure and nutrition education.

Utilization of Household food security and nutrition (HFSN) recommendations by women farmers

Among the improved seeds/seedlings introduced, cassava cuttings and maize seeds were the major ones presently being utilized by majority of the participants (Table 4). The percentage for the two crops was 72.0 percent. There was a poor utilization of fertilizer by women for most of their crop production. However, majority (77.5%) of the women indicated they have utilized them before. Only 1.0 percent of the women farmers indicated their present usage of fertilizer. There was also poor utilization of improved livestock breeds (5.5%) and feeding of livestock with crop residue (34.1%). Out of all the processing equipment, cassava processing machine, melon sheller and maize hand sheller were well utilized by more than half of the women in the state. The percentage of women who indicated their present usage is 79.6%, 57.3% and 55.7%,

respectively. Majority (86.1%) of the women still practice continued breastfeeding while less than half (45.4%) of the women currently breastfeed their children exclusively. Majority (61.7%) of the women presently utilize gardening for nutrition due to availability of space in their background to practice it. The most currently utilized of all soybean products are soymilk and soy-ogi with the percentage of 73.1% and 66.9% respectively; 73.9 percent and 90.7 percent of the women were currently utilizing growth-monitoring technique and iodized salt. The frequencies and percentages of respondents who had used each recommended practice before but discontinued are shown in Table 4. The reasons adduced for discontinuance of the various recommendations by women farmers include non-availability of input/recommendations (77.0%), poor germination of seeds/seedlings (37.8%), late arrival of inputs (37.8%), lack of time for preparation (36.1%) and lack of access to enough information (27.5%).

Nutritional status of children in the study area

The height for age (HAZ) index show that 35.3 percent of the participants' children and 58.7 percent of non-participants' children fell below minus two standard deviations (-2SD) from the median of the reference population for the height for age index (Table 5). This implies that about 3 in every 10 children were stunted in the study population for the participants' communities while 6 in every 10 children were stunted in the non-participants' communities. In relation to weight for height (WAZ) index, 5.5 percent of the participants' children and 7.5 percent of the non-participants' children suffer from wasting. This implies that a small percentage of the children from both participants and non-participants' suffered recent under-nutrition.

Children below two standard deviation (-2SD) from the mean of the reference population are classified as being underweight. A similar pattern as reported for height for age and weight for height is observed in weight for age. Children of non-participants were more underweight (33.8%) and, therefore, fell in the very high prevalence reference value. However, only 14.9 percent of the participants' children were underweight and fell in the medium prevalence reference value.

Relationship between the nutritional status of participants and non-participants

The result of the t-test is presented in Table 6. The table shows that there was a significant difference in the weight for age and height for age indices of the children of participants ($t = 9.29$) and non-participants ($t = 6.52$). The result indicates that participants' children were nutritionally better in terms of prevalence of under-nutrition and stunting. The difference could be

entrenched in the effect of the programme. Participants were exposed to the programme and utilized the various recommendations over the years, which had resulted into better nutrition.

CONCLUSION AND RECOMMENDATION

It is evident from the findings of this study that women farmers who were participants possessed some characteristics, which influenced the nutritional status of the children. Women farmers who had formal education were more among the participants than the non-participants. The majority of participants and non-participants were between the age category of 30 and 39 and were living with their spouses. The average number of children was 6 for participants and 7 for non-participants. Women farmer participants, however, had higher years of formal schooling than the non-participants. Participants earned higher incomes, and were members of more social organizations than non-participants. Majority of participant household heads were literate and had attained primary, secondary or tertiary education while lesser percentages of non-participant household heads were represented in the same category. Majority of the participants sourced water from wells while majority of non-participants failed to treat their water before drinking. Also, majority of non-participants and lesser percentage of the participants made use of the bush for human waste disposal. Participants utilized health services on a more regular basis than non-participants and most of the participants were more food secured than the non-participants.

A substantial percentage of participants utilized improved cassava cuttings and improved maize varieties while improved livestock were poorly utilized. Although, the nutritional status of participants' children were better than that of non-participants' in terms of height for age, weight for height and weight for age indices, protein energy malnutrition is still a major problem of public health importance in the study area.

The study, therefore, recommended that incidence of malnutrition could be reduced through constant surveillance from the agricultural and health workers. Agricultural workers attached to rural areas should be equipped with simple anthropometric tools to assess the children under the age of five. This will go a long way in identifying early and correcting malnutrition. Also, there is need for health, extension and educational departments to work together in providing women farmers with education and training to support their roles in household food security and nutrition management and be encouraged to utilize such recommendations. Government must ensure that there is adequate provision of potable water and sanitary means of human waste disposal in rural areas. This will go a long way in reducing the

incidence of water borne diseases and improve the nutritional status of the people. There is need for women farmers to be educated on socio-economic and household characteristics, which are likely to affect the nutritional status of children and other household members in general.

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Table 1. Percentage Distribution of Respondents by personal Characteristics

Personal/socio-economic characteristics	Participants (n = 210)	Non-participants n = 210
Age (years)		
20-29	16.7	20.3
30-39	51.5	47.0
40-49	31.8	32.7
	Mean = 35.79	Mean = 35.08
Marital Status:		
Married and living with husband	87.9	71.3
Widowed	5.0	15.6
Separated	4.9	2.7
Divorced	2.2	2.5
Religion		
Christianity	55.1	59.0
Islam	43.5	40.0
Traditional	1.4	1.0
Total Number of Children		
1 - 4	40.4	42.9
5 - 8	59.1	53.4
> 8	0.5	3.7
	Mean = 6	Mean = 7
Years of Schooling		
None	29.4	52.0
1 - 6	45.4	42.3
7 - 12	20.0	5.7
> 12	5.2	-
	Mean = 5.2	Mean = 3.8
Major Occupation		
Farming	42.7	60.8
Trading	37.2	13.7
Agro-processing	9.6	16.6
Artisan	4.4	6.8
Civil Servant	6.1	2.1
Social Organizations		
Religious Organizations	82.7	52.7
Cooperative Organizations	72.1	46.5
Women Groups	76.0	8.1
Community Development Associations	28.9	18.1
Political Organizations	15.9	4.7
Village Council	6.7	8.1
Annual Income (in naira)		
0 -20,000	10.3	34.8
20,001 - 40,000	53.4	48.2
40,001 - 60,000	24.9	16.6
60,001 - 80,000	6.3	0.4
> 80,000	5.1	-
	Mean = 46,850.75	Mean = =30,919.40
Size of Farm Land Cultivated		
Less than 1	34.5	22.2
1 - 1.99	46.8	54.7
2 - 2.99	13.2	20.2
3 and above	11.5	10.4
	Mean = 1.86	Mean = 1.32

Source: Field Survey, 2002

Table 2. Percentage Distribution of Respondents by Household Characteristics

Household-related characteristics	Participants	Non-participants
Women Status		
Household Head	15.1	24.6
1st/only wife	68.1	54.9
2nd wife	16.4	18.2
3rd wife	0.4	2.3
Age of household head		
21 - 30	13 (6.7)	13.7
31 - 40	90 (45.0)	23.4
41 - 50	84 (42.0)	60.8
> 50	13 (6.3)	2.1
	Mean = 40.7	Mean = 40.2
Household size		
1 - 6	20.2	16.2
7 - 12	71.6	72.9
13 and above	8.2	10.9
	Mean = 8.31	Mean = 8.58
Years of Schooling of household head		
0	28.0	43.9
1 - 6	31.3	32.3
7 - 12	30.1	17.4
13 - 18	10.6	6.4
	Mean = 7.09	Mean = 4.21
Sources of drinking water		
Well	63.5	51.2
Stream	3.5	17.7
Borehole	33.0	31.1
Water treatment		
No treatment	57.0	79.9
Addition of Alum	14.7	12.1
Filtration	19.6	5.7
Boiling	8.7	2.3
Waste disposal		
Bush	33.3	66.2
Ordinary Pit Latrine	54.2	31.7
VIP	8.4	2.1
Waste Closet	4.1	-
Use of health services		
Regularly	60.5	22.2
Occasionally	39.1	69.6
Not at all	0.4	8.2
Household food security status		
Food insecure	9.9	56.4
Moderate	77.2	27.3
Food secure/adequate	12.8	16.2

Source: Field survey, 2002

Table 3. Percentage Distribution of Respondents by Child-related Factors

Child-related characteristics	Participants	Non-participants
Age (months)		
0 - 12	31.8	22.1
13 - 24	35.7	38.7
25 - 36	16.3	18.2
37 - 48	12.5	15.8
49 - 60	3.4	5.2
Mean	22.20	24.86
***Diseases suffered**		
Malaria (fever)	97.1	97.6
Diarrhoea	58.4	67.2
Respiratory infection		
(cold)	28.0	44.0
Cough and headache	9.4	17.9
Measles	9.4	17.6
Typhoid	2.75	3.5

Source: Field survey, 2002 Multiple responses were provided

Table 4. Distribution of Participants by Utilization of the Various Introduced Recommendation

Recommendation	Presently using	Have used before	Never used
Maize	145(72)	48(24.1)	8(4.0)
Cassava	145(72)	47(23.4)	9(4.)
Oil-palm	8(4.0)	85(42.3)	108(53.7)
Citrus	7(3.5)	82(40.7)	112(55.7)
Mango	17(8.5)	74(36.8)	110(54.7)
Soybeans	38(18.9)	96(48.1)	67(33.3)
Fertilizer	2(1.0)	156(77.6)	43(21.4)
Improved Livestock breeds	11(5.5)	13(6.5)	177(88.0)
Crop residue	69(34.1)	23(11.2)	10(54.7)
Cassava processing	160(79.6)	17(8.5)	24(11.9)
Palm oil processing	18(9.5)	23(11.4)	160(80.1)
Melon hand sheller	115(57.3)	17(8.3)	69(34.4)
Maize sheller	112(55.7)	14(7.0)	75(37.3)
Exclusive breastfeeding	91(45.4)	62(30.8)	48(23.8)
Continued breastfeeding	173(86.1)	23(11.4)	5(2.5)
Gardening	124(61.7)	19(9.5)	58(28.8)
Soymilk	147(73.1)	37(18.4)	17(8.5)
Soyflour	83(41.3)	43(21.4)	75(37.3)
Soy-ogi	134(66.7)	45(22.3)	22(11.0)
Growth monitoring	148(73.6)	47(23.4)	6(3.0)
Idoized salt	182(90.5)	17(8.4)	2(1.1)
Vitamin A	85(42.3)	115(57.2)	1(0.5)
Iron	36(17.9)	164(81.6)	1(0.5)

Source: Field survey, 2002

Table 5: Prevalent of Malnutrition in Children (0 - 5 years) of Participants and non - Participants

	Participants		Non-participants	
Type of malnutrition	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Stunting (HAZ)	71	35.3	118	58.7
Wasting (WHZ)	11	5.5	15	7.5
Underweight (WAZ)	30	14.9	68	33.8

Source: Field survey, 2002

Table 6:Test for difference between the Nutritional Status of Children in the two Groups

Variable	Group	Number of cases	Mean score	F - value	p - value
WHZ	Participants	201	0.56	0.186	0.667
	Non participants	201	3.01		
WAZ	Participants	201	9.96	9.29	0,002*
	Non participants	201	1.07		
HAZ	Participants	201	22.2	6.52	0.011*
	Non participants	201	3.41		

* Significant at p< 0.05

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ASSESSMENT OF YOUTH INVOLVEMENT IN COMMUNITY DEVELOPMENT OF IKORODU LOCAL GOVERNMENT AREA OF LAGOS STATE, NIGERIA

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This study investigated youths involvement in community development activities in Ikorodu Local Government area of Lagos State, Nigeria. Interview schedule was administered to one hundred and fifty (150) randomly selected respondents from three administrative wards in the study area. Data were analysed using frequency counts, percentages, and chi-square (X^2). The results indicated that the youths involved in a wide range of community development activities, such as feeder road construction, provision of good water system, building of schools, clearing of drainage channels, construction of postal agency, market construction, repairs of broken roads among others. Findings also showed that male and female youths were involved in the community development activities of their communities, majority of whom had formal education. They got technical expertise for community development activities from the community leaders and community development/welfare officers while the important factors motivating them to be involved in community development activities are the need to boost income generated and desire to gain experience. Also, significant relationship was obtained between the level of involvement and educational attainment ($X^2 = 0.24$, $p = 0.022$), sex (X^2 15.15, $p = 0.000$) and age ($X^2 = 2.08$, $p = 0.030$). It is recommended, among others, that the youths be given the right incentives by governments and other agencies to intensify their involvement in community development activities. Also social amenities should be provided in the study area to encourage the youths to stay back.

Key words: *assessment, involvement, community development activities, youth.*

INTRODUCTION

The issue of youth involvement in community development has received attention by nations in recent times. This is because it is a universally acknowledged fact that no nation can claim to be developed if the majority of its youth are not involved. This is based on the fact that the rural youth are veritable tools for accelerating rural development and agricultural transformation; however the youth often perform below their potentials because they are left to survive on the limited skills available among youth which is often inadequate.

In most developing countries, the inability of the government to provide necessary and basic facilities for the social welfare of the people living in the rural area has led to rural-urban migration. According to Adisa (2001)

the rural dwellers especially the rural youth have had to move into the urban centres to enjoy the basic facilities. This movement results to a lot of national problems such as over-population of cities and social imbalance. There is thus, the need to encourage the youths to remain in rural communities and prepare them to take up farm related activities as their profession. It is important that they are thus, involved in self-help projects aimed at developing their communities to make the area more conducive and habitable. The non-involvement of youths in such activities make those communities less habitable and so predispose them to migration.

The youths therefore need to be encouraged to participate in community development activities to make up for governments' inadequacies in this respect (Anyanwu, 1992). According to Ekong (2003), the youths constitute a formidable force for community and national development. They have been part of the overall agricultural development process in Nigeria because of the immense contribution of agriculture to the economy. Adesope (1999) reported active involvement of youths in community development activities of which agriculture is a part. The various views reported above point to the fact that youths are involved in community development activities generally. Arokoyo (1992) suggested the need to harness this rural resource for meaningful level of community development to be achieved.

A critical challenge for sustainable rural and community development in Nigeria is, therefore, the mobilization of the large numbers of youth as active participants in the developmental process. According to Jibowo (1992), participation helps youth in planning and acting together for the satisfaction of their felt needs through organized efforts to acquire skills and the concepts required for their effective involvement in the problem solving process.

The pertinent questions in this study are: to what extent do youths involve in the community development activities in the study area? What are the personal characteristics of youths that enhance involvement in the study area? What are the sources of technical expertise utilized by the youths and what are factors that motivate or constrain the youths involvement in the community development activities in the study area? The focus of the study was to assess youths involvement in community development activities in Ikorodu Local Government area of Lagos State. Specifically, this study will therefore address the following objectives:

i. Identify the personal characteristics of youths that enhance involvement in community development in the study area.

ii. Determine the extent of involvement of youths in community development of their communities.
ii. Identify the sources of technical expertise utilized by the youths in the implementation of the projects.
iv. Examine the factors that motivate the youths involvement in the community development activities.

Hypothesis: There is no significant relationship between personal characteristics of the youths and their level of involvement in community development activities.

METHODOLOGY

The study was carried out in Ikorodu Local Government Area of Lagos State, Nigeria. Data for the study was collected with the use of interview schedule. The population of the study comprised the youths in the study area. A youth was accepted as anyone between the ages of 18 and 30 years (Anyanwu, 1992). Purposive sampling was employed to select three wards out of the 10 wards abound in the Local Government Area on the basis of their degree of rurality. The selected wards were 1, 5 and 9. A village each was thereafter chosen to represent each selected ward. Respondents were sampled from each of the three wards. A youth was systematically sampled from every third household in the selected village until 50 respondents were sampled from each of the villages. This gave a total of 150 respondents sampled for this study.

Respondent's involvement in community development was measured in terms of their involvement in the feeder road construction, provision of good water system, building of school, construction of town hall, clearing of drainage channels, construction of postal agency, market construction and repairs of broken roads, and offering security services. A 3-point scale (never involve, sometimes involve and always involve) was used to assess respondents on the basis of the materials, labour, cash ideas and motivating others, they put into the development activities of their communities.

The generated data for this study were analysed using frequency counts, percentages and chi-square (X^2).

RESULTS AND DISCUSSION

Personal characteristics:

Table 1 shows that more than half of the respondents (57.33 percent) were between 20 and 25 years while 28 percent were between 26 and 30 years. Age is an important parameter in participation in community development activities as it indicates opportunity for having the human, physical and material resources

required for rational thinking and community development. Table I also shows that 65.32 percent of the respondents are males while the remaining 34.67 percent are females. It thus gives room for assessing both males and females on their involvement in community development as respondents' sex is not expected to be hindrance. About 83 percent were married. This tends to agree with the assertion of Perez-morales (1996) who asserted that young people in rural areas get married earlier than their peers in the urban zones and also become involved in adult responsibilities before urban youths. In addition, individuals that are married are expected to have more sense of commitment towards community development. The table reveals that 68 percent of them were Muslims and only 32 percent were Christians. The findings also showed that a high proportion of the respondents (64%) belonged to household size of 3 - 4, and only 57.33 percent of the respondents had post secondary education. This thus indicated that the respondents have potential to involve effectively in community development activities, as their literacy level will aid their access to information on rural development. This confirms the previous position of (Adisa, *et al.,* 2004) that showed relationship between literacy level and access to information. Results also revealed that many of the respondents (46.67%) engaged in civil service and other self employed vocational jobs, to 40 percent of these groups, provision of social amenities is imperative and will affect their economic output.

Youth involvement in community development:

Data available in Table 2 shows that respondents in the study area were adequately involved in the community development activities in the areas of feeder road construction, provision of good water system, building of school, construction of town hall, clearing of drainage channels, construction of postal agency, market construction and repairs of broken roads. Results show that majority of the respondents involved more in the area of making their labour available (73.33%) to the construction of feeder road than their contribution of ideas (62.67%). This indicates a good development for the community, as their involvement will ensure that they have good feeder roads through which their agricultural produce can be evacuated to major markets. This corroborates the assertion of Jibowo (1992) that the involvement helps youth in planning and acting together for satisfaction of their felt needs through organized efforts to acquire skills and concepts required for their effective involvement in problems solving process. In the same vein, the respondents involved more in the area of offering their labour for provision of good water system (65.33%). They were also involved in suggesting useful

and factual ideas for provision of good water system (58.67%). This is good for the agricultural development of their communities as their involvement will ensure that they have good irrigation/Fadama system through which their agricultural crops can be cultivated all year round. Similarly, the respondents contribute more of labour (62.00%) and ideas (61.33%) to the building of schools. This implies that they make their youthful vigour available for the building of schools. Results of youths involvement in the construction of town hall reveal that they contribute more of ideas (71.33%) more than they involved in the areas of labour contribution (67.33%). The study further shows that the respondents were more involved more in contributing ideas for the clearing of drainage system (71.63%) more than their involvement in the areas of motivating other (60.00%). Ability to communicate with the neighboring states and countries is important in effort at reducing rural-urban drift. To achieve this, the youths were involved in the construction of postal agency for their communities. This will facilitate the exchange of information and enhance community development. Respondents were involved more in contributing labour for the building of postal agency (69.33%) more than their involvement in the areas of motivating others (60.00%). This confirmed the position of Anyanwu (1992) that the youth are more involved in facilities that aid their development. In the same vein, the respondents were more involved in the area of labour contribution for market construction (56.00%). This will aid their economic activities as the communities are farming communities. Their ability to have functional markets will make them convey their farm produce to markets, which will help them to reduce the exploitation by middlemen. Respondents were involved in the repair of broken roads in the area of ideas contribution (76.00%), than involvement in motivating others (71.33%). This will open their communities to effective means of transportation which can help reduce rural-urban migration through enhanced relationship with other communities.

Respondents' sources of technical expertise in community development activities:

Technical expertise is important in project execution as it enhances successful implementation of such projects as well as its sustainability. Findings reveal that the sources from which respondents obtained the technical expertise which they used in the community development activities include Community Development/Welfare Officers and Community Leaders. Data available in Table 3 shows that the technical expertise that respondents used in the construction of feeder road was derived from their community leaders

(66.67%). The technical expertise that respondents used in the provision of good water system was derived from the community development/welfare officers (68.67%). Effort of community development officers in this aspect of community development is therefore commendable. The technicality of this activity as well as its use may be a reason for this. Similarly, they derived the technical expertise used in the building of schools from their community leaders (61.33%). The desire of the community leaders to have their children and wards educated may thus, be responsible for this. This is a good development in the educational development of the study area. The technical expertise used in the construction of town hall is derived from the community leaders (71.33 %). This indicates that the community leaders thus help to facilitate social interaction among members of their communities through mobilization for the construction of town hall. Respondents obtained more technical expertise on the clearing of drainage channels from their community development officers (60.67%). The construction of postal agency was facilitated through technical expertise from community leaders (69.33%). The desire to expose their communities to the neighbouring states and countries through better communication is thus a laudable and commendable effort. Technical expertise for repairs of broken roads was sought by respondents from community leaders (65.33%) more than community development officers. Also, respondents secured technical expertise for the construction of markets from community development officers (67.33%) to assist the rural dwellers in developing their source of major income generating activity.

Factors that motivate youth's involvement in community development activities

The motivating factors are presented in Table 4. Findings of the study reveal that desire to boost income generation was considered by (62.67%) of the respondents as a serious factor motivating them to be involved in community development. This will help them expand their sources of income generation. Also, ability to acquire experience was considered by (49.33%) of the respondents in the study area as a serious factor in the assessment of the community development activities. Community leaders' influence was also considered as a serious factor (40.00%). Their desire to improve their communities to reduce rural-urban drift.

Relationship between respondents' personal characteristics and their involvement in community development

Further investigation shows that marital status, sex, age, educational level and household size of the respondents show significant

relationship with their involvement in the community development activities of their communities. Table 5 reveals that age has significant relationship with respondent's involvement in community development activities (X^2 = 2.08; p = 0.030). This implies that experience and commitment to community development activities thus increase with age. The results also show a significant relationship between educational attainment and involvement (X^2 = 0.24, p = 0.022). The more educated the respondents were therefore, the more they participate. This implies that education creates better access to information and broaden people's horizon. This confirms the report of Ghai (1988) that organizing people into group in a community enhances their involvement in development programme. Table 5 also shows a significant relationship between sex and involvement (X^2 = 15.15, p = 0.000). However, there was no significant relationship between marital status and involvement in community development activities. (X^2 = 3.05, p = 0.090).

CONCLUSION AND RECOMMENDATION

The youths constitute a formidable force in community development activities. This work examined critically youths involvement in community development activities in rural communities of Ikorodu Local Government Area of Lagos State, Nigeria. The youths were found to be involved in various community development activities like feeder road construction, provision of good water system, building of schools, construction of town hall, clearing of drainage channels, construction of postal agency, market construction and repairs of broken roads. Their major sources of technical expertise for involvement in community development activities were the community leaders and community development/welfare officers. Desire for more ability to boost their income generation, and community leaders influence were also found as the factors that motivate the youths to be involved in the community development.

It is, therefore, recommended that the youths should be encourage and assisted in their community development activities through:
Motivation and provision of technical expertise in the areas of capacity building and provision of needed materials so that effective rural development can be achieved.

Also governments and other agencies should intensify the provision of amenities in rural areas to make life more comfortable for the youths. This will not only encourage them to stay back, but stimulate greater involvement in community development activities and hence help in boosting agricultural production,

bettering the economy and improving rural life.

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Table 1: Frequency and Percentage Distribution of Respondents by Personal Characteristics

VARIABLES	FREQUENCY	PERCENTAGE
Age (years)		
Less than 20 years	22	14.64
20 - 25	86	57.33
26 - 30	42	28.00
Sex		
Male	98	65.33
Female	52	34.67
Religion		
Islam	102	68.00
Christianity	48	32.00
Marital status		
Single	22	14.67
Married	124	82.66
Separate	4	2.67
Educational level		
Primary education	5	3.33
Secondary education	59	39.34
Post secondary education	86	57.33
Occupation		
Trading	20	13.33
Civil Servant	70	46.67
Household size		
1 - 2	40	26.67
3 - 4	96	64.00
5 - 6	14	9.33

Source: Field survey, 2005

Table 2: Distribution of Youths by their Involvement in Community Development activities in Ikorodu Local Government Area of Lagos State

Activities	Non Involve		Sometimes involve		Always involve	
	Freq.	%	Freq.	%	Freq.	%
Feeder Road Construction						
Cash	30	20.00	70	46.67	50	33.33
Material	14	9.33	46	30.67	90	60.00
Labour	10	6.67	30	20	110	73.33
Motivating others	14	9.33	50	33.33	86	57.33
Ideas	10	6.67	46	30.67	94	62.67
Provision of good water system						
Cash	40	26.67	65	43.33	45	30.00
Material	27	18.00	53	35.33	70	46.67
Labour	12	8.00	40	26.67	98	65.33
Motivating others	24	16.00	36	24.00	60	60.50
Ideas	16	10.67	46	30.67	88	58.67
Building of school						
Cash	73	48.67	69	46.00	8	5.33
Material	94	62.67	38	25.33	18	12.00
Labour	20	14.00	37	24.67	93	62.00
Motivating others	29	19.33	37	24.67	84	56.00
Ideas	16	10.67	41	27.33	92	61.33
Construction of Town Hall						
Cash	69	46.00	57	38.00	89	59.33
Material	18	12.00	43	28.67	18	12.00
Labour	20	13.33	29	19.33	101	67.33
Motivating others	15	10.00	38	25.33	97	64.67
Ideas	12	5.33	31	20.67	107	71.33
Clearing of Drainage Channels						
Cash	31	20.67	59	39.33	60	40.00
Material	15	10.30	56	37.33	79	52.67
Labour	14	9.33	53	35.33	83	55.33
Motivating others	14	9.33	46	30.67	90	60.00
Ideas	10	6.67	33	22.00	107	71.33
Construction of Postal Agency						
Cash	28	18.67	43	28.67	79	52.67
Material	13	8.67	64	42.67	57	38.00
Labour	11	7.33	35	23.33	104	69.33
Motivating others	4	2.67	47	31.33	99	66.00
Ideas	12	8.00	53	35.33	85	56.67
Market Construction						
Cash	53	35.33	69	46.00	28	18.67
Material	47	31.33	73	48.67	30	20.00
Labour	35	23.33	84	56.00	31	20.67
Motivating others	49	32.67	78	52.00	23	15.33
Ideas	37	24.67	84	56.00	29	19.33
Repairs of Broken Roads						
Cash	50	33.33	72	48.00	28	18.67
Material	30	20.00	51	34.00	69	46.00
Labour	16	10.07	40	26.67	94	62.67
Motivating others	7	4.67	36	24.00	107	71.33
Ideas	5	3.33	31	20.67	114	76.00

Source: Field survey, 2005

Table 3: Distribution of youths by their involvement in community Development activities in Ikorodu Local Government Area of Lagos State

Activities	Community Development Officers		Community Leaders	
	Freq.	%	Freq.	%
Feeder Road Construction	50	33.33	100	66.67
Provision of good water system	103	68.67	47	31.33
Building of school	58	38.67	92	61.33
Construction of Town Hall	43	28.67	107	71.33
Clearing of Drainage Channels	91	60.67	59	39.33
Construction of Postal Agency	46	30.67	104	69.33
Market Construction	101	67.37	49	32.67
Repairs of Broken Roads	52	34.67	98	65.33

Source: Field survey, 2005

Table 4: Factor that Motivate Youths Involvement in Community Development

Factors	Less Factor		Little Factor		Serious Factor	
	Freq.	%	Freq.	%	Freq.	%
Peer group influence	56.00	53.44	46	30.67	24	16.00
Community leader influences	50	33.33	40	26.67	60	40.00
Parental influences	80	53.33	40	26.67	30	20.00
To gain experience	37	24.67	39	26.00	74	49.33
Skill acquisition	54	36.00	42	28.00	54	36.00
To boost income Generation	26	17.33	30	20.00	94	62.67

Source: Field survey, 2005 *Multiple responses

Table 5: Relationship between Respondent's Personal Characteristics and their Involvement in the Community Development

Characteristics	Df	X^2 Value	P	Decision
Marital status	2	3.05	0.090	NS
Sex	1	15.15	0.000*	S
Age	4	2.08	0.030*	S
Education level	3	0.24	0.022	S
Household size	5	7.76	0.053	NS

Source: Field survey, 2005 *-Significant at 0.05 level df - degree of freedom

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INVOLVEMENT OF ADOLESCENTS IN FOOD PROCESSING FOR HOUSEHOLD FOOD SECURITY IN OSUN STATE, NIGERIA

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This study focused on the involvement of adolescents in food processing in Osun State of Nigeria. Four hundred and one (401) adolescents in school were randomly selected from thirty two public secondary schools of the State. Structured questionnaire was used to elicit quantitative information from the respondents. Statistical techniques like frequency count, percentage and ANOVA were used in data quantifications. The result indicated that rural adolescents participated more than their urban counterparts in 'gari' and 'iru' processing while the urban adolescents were involved more than the rural counterparts in soybean and fish processing. In general, the level of involvement was low, only 9.7 percent of the total respondents were ranked high. The data further showed that significant differences exist between urban and rural adolescents in the performance of 'Gari' processing (F=2.32), Soybean processing (F= 4.34), 'Elubo' processing (F=1.19), and 'Iru' (Locus beans) processing (F=1.01) at $p<0.05$ level of significance. Food items rich in protein were processed less by the adolescents and level of participation was low. It is, therefore, recommended that, processing of food items should be encouraged among adolescents especially in the period of surplus in order to learn the skill involved for household food security and sustainability.

Key words: *Involvement, food processing, household food security, adolescents.*

INTRODUCTION

Food processing and preparation traditionally has been the responsibility of the woman of the house (the wife and mother) (FAO, 1995), (Awoyinka and Ogunba, 1999). It has been an important step in meeting the nutritional needs of the family. It is not enough that food is nutritious, it also has to be pleasing in appearance and taste so that it is eaten. The nutritional quality of the diets have been a matter of concern for sometime (Hackett *et al.*, 1997). The way the food is processed determines the quality of the finished product/food. Therefore, it is important to acquire the ability to process food, which is nutritious and acceptable to the family. As a result of this, the mother usually involves the children in food processing from the scratch, especially at adolescence. Most of the time, the children, under the supervision of the mother carry out the preliminary activities of food processing (FAO,1995). The term

processing encompasses all of the ways in which agricultural products are treated to preserve them and/or to prepare them for consumption as food (Shelton, 1998). Food processing has been going on for thousands of years, historically, much of the processing has been carried out in the home. However, in technologically developed nations, a very large proportion of foods processing is now carried out by industries (Shelton, 1998).

When observed carefully, it could be noticed that the children carry out more activities than the mother who only puts finishing touches to the task. As in any other art or practice, it is essential but the practice must be intelligently directed. To be proficient in food processing skills, one must make effort to observe carefully those who are proficient in food processing and get opportunities to handle food. This could also enhance the food security of the households. According to (Riely *et al.*, 1999) food accessibility is ensured when households and all individuals within those households have adequate resources to obtain appropriate foods for a nutritious diet. Household access to food primarily depends on home production, household income, and food price. Income and prices are special concerns in urban areas where home food production for consumption is low which could lead to malnutrition.

The causes of malnutrition are complex, multidimensional, and interrelated. An understanding of the most important causes of malnutrition is imperative if the current unacceptably high numbers of malnourished children are to be reduced. Malnutrition causes a great deal of human suffering both physical and emotional, and it is a violation of a child's human right (Oshang *et al.*, 1994, Bundy *et al.*, 1998). Good health and adequate nutrition promote both physical growth and learning, while good health and nutrition education at school age can lay the foundation for life long good health (Bundy *et al.*, 1998).

There is increasing evidence, with resulting international concern that the high level of nutritional deprivation combined with the heavy burden of disease has negative consequences for a child's long term overall development. This has prompted an increased focus on the diverse needs of the adolescents (World Bank, 2000). Foreign based food products are heavily advertised and consumers choose them over indigenous foods (Amadou, 2004). One of the caring practices for children which are crucial for their nutritional well being is food preparation, processing and storage (Lisa *et al.*, 2003).

The problem of nutrition is a very wide one. Efforts have been made in the past to find a lasting solution to the problem, but as a problem is being solved, another one emerges. Programmes such as better life for rural women and family

support programmes have been targeted towards mothers who are responsible for providing foods for the children, but are not sustainable for a long time.

Therefore, there is a need to re-channel attention for obtaining a lasting solution. Adolescents within the ages of 10 and 19 years,as defined by WHO (2003) and United Nations (1998) are homemakers in the nearest future. Since adolescence is a time during which dietary habits that may persist for life are formulated, attention should be directed towards the problem of the act of food processing. This study investigated the extent to which adolescents participate in the processing of foods for household food security for continuity and sustainability. Specifically, the study is to:

1. identify the types of food items processed by rural and urban adolescents.
2. identify the various food processing activities carried out by the adolescents and
3. determine the level of participation in the activities.

The study hypothesized that there is no significant difference in the performance of specific activities between urban and rural adolescents at various stages of food processing.

METHODOLOGY

The study was carried out in Osun State, which consists of thirty Local Government Areas (LGAs), which were grouped into three senatorial districts namely Osun Central, Osun East and Osun West with 10 LGAs in each district.

In Osun State, there are three hundred and nineteen (319) public secondary schools. There are 239,829 students in public secondary schools in the state (ministry of Education, Osogbo). Two local governments were selected from each district, based on the total number of schools in the LGAs. Multi-stage method of sampling was used, 10 percent of the total number was randomly selected to give 32 schools. Four hundred and one adolescents aged 10 and 19 years were interviewed from public secondary schools.

The instrument that was used to elicit quantitative information from the students was the structured questionnaire, which was self-administered by the respondents. The questionnaire provided information on participation of the children in food processing.

Both descriptive and inferential statistics were used such as frequency counts, percentage and analysis of variance (ANOVA) to differentiate between the participation of urban and rural adolescents in food processing activities.

Variables for participation in food processing were scored and rated to

rank the adolescents on a level of participation. They were thereby rated in a participation rung as having high, moderate and low participation.

RESULTS AND DISCUSSION

The Participation of Adolescents in Food Processing Activities

The results of participation of adolescents in food processing activities within the urban and rural areas in the study area were presented in Tables 1, 2 and 3.

The food items that the respondents processed alone without any assistance included. 'ogi' 'gari', palm oil, soy bean, yam flour, smoking of fish, rice milling and locus beans. 78.6 percent of the total respondents processed maize into (ogi), 46.9 percent processed palm oil from palm fruits while 27.4 percent processed soybeans into milk, cheese or powder.

The processing of yam flour, smoking of fish, rice milling and locus beans were done by 44.9 percent, 59.6 percentage, 46.1 percent and 14.0 percent, respectively.

Across the urban and rural areas, the same trend was followed except in the processing of cassava into 'gari' and maize into 'ogi', which were performed more by rural respondents than urban adolescents.

Level of Adolescent Participation in Food Preparation Activities

Very few were classified as having high participation, probably because they do not have the full time to participate in the activities and part of the little time they spend at home during the week and on weekends was used in food preparation and processing activities. The score of respondents' level of participation in food processing activities in the urban and rural locations were presented in fig.1. Majority of the respondents (56.1%) were rated as having moderate level of participation (score =1.57-5.13) while 9.7 percent ranked high (score ≥ 5.14). About 34.2 percent ranked low in participation (score < 1.57) as shown in Table 2.

This finding corroborates with the findings of Awoyinka and Ogunba, (1999). Though the level of participation was higher among the rural adolescents in Awoyinka and Ogunba's findings probably because all the adolescents both those in school and out of school were considered in their study, whereas this study under investigation targeted only the adolescents in schools only, though both in the rural and the urban areas of the state.

Differences between the Performance of Urban and Rural Respondents in Food Processing

ANOVA was used to differentiate

between the performance of urban and rural respondents in food processing. Results from Table 3 indicated that significant differences at 0.05 level of significance exist between urban and rural respondents in the performance of specific activities 'gari' processing (F=2.32), soybean processing (F=4.34), 'elubo' processing (F=1.19) and 'iru' (Locus beans) processing (F=1.01). However, there was no significant difference in the performance of activities such as processing of maize (F=0.36), palm oil (F=0.09), smoked fish (F=0.38) and rice (F=0.15). The results further indicated that adolescents in the urban areas participated more in some activities than their rural counterparts. This is so because the dichotomy of urban versus rural is becoming irrelevant with urbanisation and globalisation, particularly among adolescents (Gregory, 2000). The act of food processing is not a popular practice among the youths in school in the study area, this is reflected in the ranking as shown in Table 2. Less than 10.0 percent of the total respondents were scored as high. Worse still, the processing of the food that are rich in protein (Soy bean and Locus bean) were the least performed.

CONCLUSION AND RECOMMENDATION

School children within the ages of 10 and 19 years are homemakers in the nearest future. Efforts should be made to encourage them to embrace the habit of food processing in order to ensure food and nutrition security. Since this is a time during which dietary habits that may persist for life are formulated, attention should be directed towards the problem. Similarly, the act of food processing is a lucrative business if modernized through biotechnology. Food items during surplus seasons could be processed into semi or finished products, which would be sold during "hunger season" i.e beginning of new planting season to alleviate poverty. It is therefore recommended that: the participation of the adolescents in food processing, especially, those in schools should be intensified so as to ensure sustainable food security in the country; and government policy makers should design programs that will be specific for adolescents with the participation of the adolescents in every stage of the program and this should be reflected in the national policy on nutrition, as a policy reform.

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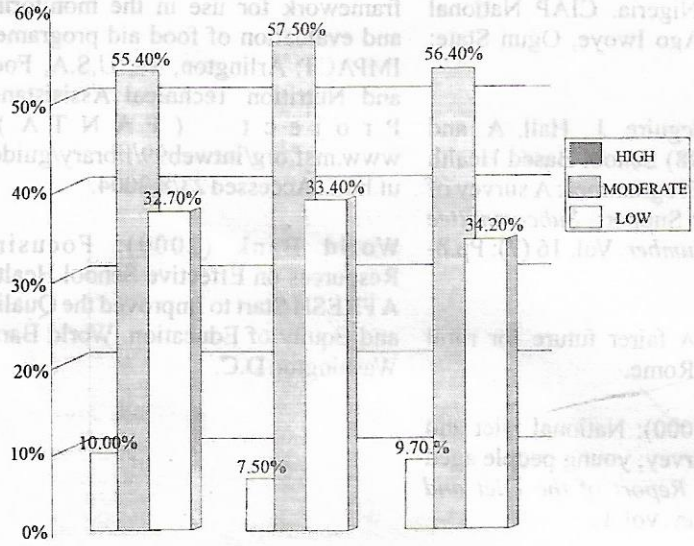

Figure 1: Distribution of Respondents according to Level of Participation in Food Processes Activities

Table 1: Frequency Distribution of Respondents according to Food Items Processes

Processing of Food Items	Urban N = 267 Freq.	%	Rural N = 134 Freq.	%	Total N = 401 Freq.	%
Maize into 'Ogi'	209	78.3	106	79.1	315	78.6
Cassava to 'Gari'	118	44.2	70	52.2	188	46.9
Palm oil processing	43	16.1	20	14.9	63	15.7
Soybean to milk/cheese/powder	82	30.7	28	20.9	110	27.4
Yam flour processing	125	46.8	55	41.0	180	44.9
Smoking of fish	162	60.7	77	57.5	239	59.6
Rice milling	125	46.8	60	44.8	185	46.1
Locus beans	34	12.7	22	16.4	56	14.0

Source: Field Survey, 2004 N = Number of Respondents

Table 2: Frequency Distribution of Respondents according to Food Items Processed

Level of Participation	Urban		Rural		Total	
	Freq.	%	Freq.	%	Freq.	%
High (>5.14)	29	10.9	10	7.5	39	9.7
Moderate (1.57 - 5.13)	148	55.4	77	57.5	22.5	56.1
Low (<1.57)	90	33.7	47	35.1	137	34.2

Source: Field Survey, 2004 Mean =3.35:

Table 3: Result of ANOVA Test Out on Performances of Specific activities between Urban and Rural Respondents in Food Processing

		Sum of Sguares	Mean Square	F	Sig.
'Ogi'	Between Groups	0.006	0.006	0.036	0.849
	Within Groups	67.550	0.169		
	Total	67.556			
'Gari'					
	Between Groups	0.577	0.577	*2.3420	0.128
	Within Groups	99.283	0.249		
	Total	99.860			
'Palm oil'	Between Groups	0.012	0.012	0.093	0.760
	Within Groups	53.090	0.133		
	Total	53.102			
'Soya bean'	Between Groups	0.860	0.860	*4.344	0.038
	Within Groups	78.966	0.198		
	Total	79.825			
'Elubo'	Between Groups	0.297	0.297	*1.199	0.273
	Within Groups	98.905	0.248		
	Total	99.202			
'Smoked fish'	Between Groups	0.092	0.092	0.381	0.538
	Within Groups	96.462	0.242		
	Total	96.554			
'Rice'					
	Within Groups	99.614	0.250		
	Total	99.651			
'Iru'					
	Between Groups	0.121	0.121	*1.005	0.317
	Within Groups	48.058	0.120		
	Total	48.180			

Source: Field Survey, 2004 *Significant at p<0.05

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ASSESSMENT OF HAZARDS AFFECTING CHILDREN ON THE FARM: A CASE STUDY OF IJEBU NORTH LOCAL GOVERNMENT AREA OF OGUN STATE, NIGERIA

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The study investigated the incidence of hazards on children involved mainly in crop farming. Data were collected from 250 respondents selected through simple random sampling technique using structured interview schedule. Data obtained were analysed with the use of simple averages and percentages. Chi-square analysis was further used to test the stated hypothesis at 0.05 level of significance. The results indicated that the children were exposed more to such hazards as body pains (100%), body itching (96%), cold/fever (90%), foot rot (82%), stings(56%) and bites(64%) among others. The study further reveals that the children were used to traditional precautionaries and control measures rather than modern methods. It is therefore recommended that children should be enlightened to employ modern methods of preventing and controlling hazards on the farm. Such measures include putting on boots, wearing of eye goggles, hand gloves and overall among others.

***Key words**: Assessment, hazards, children, Farm.*

INTRODUCTION

The International Labour Organization (ILO, 2000) stated that agriculture employs half of the world labour force and an estimated 1.3 billion workers are active in agricultural production world wide. Although, in the developed nation, the proportion of the work force engaged in agriculture is under 10 percent the proportion is 49 percent worldwide with almost 60 percent concentrated in developing countries.

Working conditions vary from country to country and among developed and developing countries depending on whether methods is highly mechanized as depicted in commercial plantations or traditional intensive in the case of small scale subsistence agriculture (World Bank, 1989). Although new process and new forms of work organization have made considerable progress in agriculture, in certain countries, dependence on weather changes to perform agricultural work proves to be an obstacle to efficient operations and may completely modify working conditions, making them difficult and dangerous (e.g. a rainstorm while harvesting, or the gust of a sudden wind during application of pesticides) (Schumann, 1985).

In Nigeria, majority of crop farmers and

their children, reside in rural areas where they enjoy the resources of nature. They are involved in agriculture as suppliers of labour, food crop processors of food products, marketers of peasant farm surplus and the home (Central Bank of Nigeria, (CBN) 1994).

While new technologies are being applied in agriculture, small scale farming is particularly characterized by low levels of technology and high work heads (Babara,1993). Primitive hand tools, hoes and ploughs, heavy loads and sustained physical work pose agronomic hazards especially to children. Farm implements and long hours with poor work postures are reported as risks by both researchers and farmers including their children (ILO, 2000). In small scale farming in which children are mostly involved, it is uncommon for farmers and their children to be aware of, let alone protect themselves against the major occupational hazards (Von Hildebrance, 1994).

As reported by Gruat (1990), farmers including their children do not put on necessary protective clothing when using chemicals and the necessary equipment are not used because they may be either too expensive or unobtainable. The ILO (2000) pointed out that children and other agricultural workers are affected by a number of hazards which can be classified as physical, mechanical, chemical, biological, agronomic and work organization hazards.

While the conditions of employment and hazards of agricultural work are often poorly monitored especially concerning children, there is increasing evidence that agricultural workers face significant occupational hazards. It is recently reported by ILO (2000) that at least 170,000 workers die each year and 100 million more of the world's 1.3 billion agricultural workers including children suffer from serious occupational hazards. Whereas occupational mortality has declined in recent times in other hazardous occupations such as mining and construction in which children are less involved, those in agriculture have continued to rise putting children more at risk. This study is consequently aimed at assessing the incidence of occupational hazards among children involved in farming activities in Ijebu North Local Government Area of Ogun State, Nigeria. The paper hopes to specifically identify the socio-economic characteristics of the children; examine common occupational hazards to which children are exposed and determine the treatment methods employed. It is hypothesized that, there is no significant relationship between the socio-economic characteristics of the children and incidence of occupational hazards.

METHODOLOGY

The study was carried out in Ijebu North Local Government Area of Ogun State, Nigeria. The population for the study consists of children helping their parents on the farm. A total of two hundred and fifty (250) respondents were selected for the study using multi-stage random sampling technique.

Information was collected from the respondents with the use of structured interview schedule. To measure the degree to which the hazards affected the children, the total number of effects were added and ranked on 1 to 10 continuous scale. And to measure the rate of involvement of the children on the occurrence of hazards, a 5 point like scale was used. Data collected were subjected to descriptive and inferential statistics. The descriptive statistics involved the use of frequency distributions and percentages while Chi-square was used to test the stated hypotheses.

RESULTS AND DISCUSSION

Results revealed in table 1 shows that most (70%) of the children respondents were between the ages of 7 and 8 years. Very few (4%) were under 8 years. This implies that majority of the children could actually have the capacity and ability to be involved in practical farming activities and could have experienced one hazard or the other on the farm.

As for the sex, the results show that more male children (60%) were involved in agricultural activities than the female. The children also practice either Christianity (52%) or Islamic religion (48%). All the children were literates with 54 percent having primary education and 46 percent with secondary education. This implies that since they could read and write, educating them on prevention of hazards on the farm would be enhanced. As indicated in table 2, all the children were involved in manual weeding, contract labour and crop production. They were less involved in application of herbicides (45%) and application of insecticides (45%). This implies that children in the area of study would experience more hazards in the physical process of farming than in the use of agro chemical.

All the children as shown in table 3 experienced body pains and were exposed to stepping on sharp objects. There is virtually any type of farming activity that will not involve exerting some amount of energy. This therefore explains why the children experienced body pains as a result of their farming activities. They were also prone to stepping on sharp objects because they rarely put on shoes like rain boot. The legs were therefore exposed to sharp objects which could be injurious to them.

The study further shows that the

children were least involved in alcoholism and drug abuse. The children indicated that the crude implements used in farming affected their health adversely. In ranking the hazards according to severity and from the perception of the children, body pains, over work, body itching, cold/fever and foot rot topped the list respectively. Health education, first aid provisions and preventive measures should be focused more on these hazards.

Table 5 provides information on the preventive and treatment measures the respondent used to control hazards on the farm. The table reveals that very low percentage of the children used modern methods except putting on caps or scarf on their heads (88%). They rarely used other modern cautionary measures such as nasal protectors (34%), hand gloves (38%), overall (30%), rain boots (18%), and eye goggles (08%) none had first aid boxes (0%). Most of the children were ignorant of these modern equipments of safe guarding against hazards on the farm. Most of the children used traditional methods as cautionary measures against hazards on the farm (Table 5). Some of the indigenous methods include holding sticks vertically when slashing (92%), burning incense (78%); use of herbs and incisions (72%). To some extent, some of the respondents consulted oracles for safety (66%). The children claimed that traditionally by consulting oracles for prayers ("*ase*" in Yoruba) and taking incisions, they were well protected against farm hazards such as matchet cuts, snake bites, poisons, body pains and most other hazards on the farm. In the area of study, they commonly refer to the indigenous incisions and traditional medicine as *"Ajesara"* in Yoruba language.

Testing of hypothesis

The first hypothesis stated in the null form is that there is no significant relationship between socio-economic characteristics of the children and incidence of hazards on the farm (Table 6).

Table 5 reveals that variables such as age, gender, farming experience and type of agricultural activity have no significant relationship with the incidence of hazards on the farm. This implies that no matter the age young or old; the sex male or female, the farming experience long or short and the kind of agricultural activities the children may be involved in, hazards will still occur. However, the level of education of the children gave significant relationship with the incidence of hazards (calculated Chi-square = 4.873 and tabulated = 3.84; $p<0.05$). This means that the higher the level of education, could exposure the children to modern methods of averting hazards which would enhance the control of hazards on the farm.

CONCLUSION AND RECOMMENDATION:

The study highlighted the major hazards children could be exposed to on the farm. The most prominents being body pains, foot rot, cold, fever, bites and matchet cuts among others. The precautionary measures used by the children were mainly traditional. The children were ignorant of most modern methods of averting hazards on the farm. Based on the findings of the study, the following recommendations were proffered:

Children should be educated and enlightened through well articulated extension programmes designed to teach children in modern methods of averting hazards on the farm.

Health care clinics should be provided in rural agrarian areas to improve the health status of the children involved in farming.

Extension package on control or reduction of hazards on the farm especially for children should be made more effective.

Children should be encouraged to form clubs through which they could easily be reached by extension agents. This will make extension delivery easier to reach them on vital issues such as prevention and control of hazards on the farm.

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Table 1: Personal Characteristic of Respondents

Variable	Frequency	Percentage %
Age		
Under 18	10	4
8 - 12	30	12
13 - 16	35	14
17 - 18	175	70
Total	250	100
Sex		
Male	150	60
Female	100	40
Total	250	100
Religion		
Christianity	130	52
Islam	120	48
Total	250	100
Education		
Primary	135	54
Secondary	115	46
Total	250	100

Source: Field survey, 2004

Table 2: Activities of the Children on the Farm (N = 250)

Variable	Frequency	%
Agricultural activities		
Firewood gathering	213	85
Contract labour	250	100
Processing crops	35	14
Livestock products	163	65
Weeding (manual)	150	60
Crop production	250	100
Application of Herbicide	113	45
Application of Insecticide	113	45

Source: Field survey, 2004 Multiple responses possible

Table 3: Hazards Experience by Children on the Farm

Hazards	Frequency	%
Body pain	250	100
Itching	240	96
Cold/Fecer	225	90
Skin rash	115	46
Foot rot	250	82
Burns	100	40
Bites	160	64
Sting	140	56
Matchet cut	75	60
Fall from tree	75	60
Inhaling chemical	100	40
Poor nutrition	60	24
Over work	220	88
Inadequate rest	220	88
Drug abuse	10	4
Alcoholism	15	6
Stepping on shape objects	250	100

Source: Field survey, 2004 Result indicate multiple response

Table 4: Ranking of the effects of hazard on the Children (n = 250)

Hazard	Score	Ranking
Body pain	220	1st
Over work	154	2nd
Body Itching	154	2nd
Cold/Fecer	132	4th
Foot rot	129	5th
Inadequate rest	96	6th
Stepping on shape objects	89	7th
Sting	59	8th
Bites	54	9th
Skin rash	47	10th
Eating with infected fingers	46	11th
Burns	38	12th
Sprain	36	13th
Inhaling chemical	36	13th
Poor nutrition	11	15th
Machete cut	9	16th
Fall from tree	5	17th
Drug abuse	3	18th
Alcoholism	1	19th

Source: Field survey, 2004

Table 5: Prevention and Treatment of Hazards affecting Children on the Farm

Preventive measures					
Modern Methods (use of safety Gadgets)			Traditional Method		
	Methods	Frequency	Percentage	Methods	Frequency	Percentage
1.	Nasal Protectors	85	34	Holding stick when slashing	230	92
2.	Hand Gloves	95	38	Burning incense	195	78
3.	Overall	75	30	Setting traps	195	78
4.	Boots	45	18	Use of herbs and incision	180	72
5.	Caps/scarf	220	88	Consulting the oracle	165	66
6.	Eye goggles	20	08	Pruning branches	140	56
7.	First aid box	0	0	Spraying doing on the chemical	135	54

Source: Field survey, 2004

Table 6: Chi-Square analysis a Showing Relationship between Socio-Economic Characteristics of Farmers and Incidence of Hazards

Variable	Chi-Square value		Level of Significance		Remarks
	Calculated	Tabulated	df		
Age	0.537	3.83	3	0.05	Not significance
Sex	0.376	3.83	1	0.05	Not significance
Farming Experience	0.055	3.83	3	0.05	Not significance
Level of Education	4.873	3.83	3	0.05	Significance
Type of Agricultural Agency	0.984	3.83	3	0.05	Not significance

Source: Generated from field survey, 2004

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EFFECTS OF AGRICULTURAL ACTIVITIES ON RECREATION AND TOURISM EXPERIENCES OF FARMING CHILDREN IN OGUN STATE, NIGERIA

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The study examined recreational and tourism opportunities of farming children in Ogun state. A structured interview schedule was used to gather data from 180 children from age 5 to 14 years involved in some selected agricultural activities. Findings were presented using descriptive statistics while the Pearson product moment correlation was used to test the hypothesis of the study. Findings revealed that children spent an average of 5.76 hours weekly in agricultural activities and mostly on weekends (96.1%). Majority of the children had time to play games (92.8%), watch television (65%) and visit friends (95%) weekly. Majority (53.3%) never visited outside their own place of residence (cosmopoliteness) while only 57.7% spent their holidays outside their own place of residence in six months. Cosmopoliteness of the children was the only indicator of tourism that was significant and negatively correlated to level of involvement in agriculture ($r = -0.18$, $p < 0.05$). It was recommended that schools should organize excursions for children on a regular basis.

Key words: *Games, Cosmopoliteness, Holidays, Recreation, Tourism*

INTRODUCTION

"All work and no play make Jack a dull boy" goes the old adage which reveals the importance attached to leisure time for children by those interested in child development. Leisure is generally considered to be the time when an individual has the freedom to choose what to do beyond any formal employment and the domestic requirements of life.

Recreation according to RTPI (2005) connotes a group of activities that individuals carry out in their leisure including sport and commercial leisure. It also includes passive activities such as reading, watching television, and the traditional tourism activities of taking a holiday away from home and day visits to attractions. Recreation is thus used to embrace every idea of leisure activities including tourism. Though tourism is treated synonymously with recreation and also as a sub set of it, it has its own distinct features.

Tourism basically deals with movement or travel outside the individuals immediate environment (Quinion, 1996). The advanced oxford dictionary

also defines it as the practice of traveling for pleasure or as going for holidays. In essence, leisure is classified into recreation or tourism based on the location of such activities in relation to the individuals immediate environment.

Leisure for children is important for various reasons especially due to the fact that they are in the process of growing. They need to exercise their muscles and bones for healthy development. Recreation provides opportunity to express pent up emotional feelings and tension which develop in classroom through interaction with tutors and peers. This helps children to grow up emotionally balanced and avoid some unwanted emotional traits like resentments, bitterness etc. Recreation also helps children develop creativity as they play with toys, which may be educationally oriented or just for fun. It enables children to engage their minds in constructive activities as the restless and intuitive tendencies in children make them prone to activities to fill their spare time. Recreation also helps in the development of good interpersonal relationships and attitude to life. They learn to manage success and accept defeat. Recreation could be in the form of sports / games, which may be on the open field e.g. football, hide and seek or indoors games like ludo, computer games etc. According to RTPI (2005), it also includes watching television and reading for pleasure. Recreation, therefore, has socio-emotional and educational benefits for children.

Tourism on the other hand, though having a base line of pleasure seeking, is also educative by nature as the children are exposed to things they have not seen or heard before or those they have heard but not seen. It boosts classroom efforts by creating real live audio-visual effects. Tourism helps to create awareness and interest in the children which may go a long way in determining future decisions such as career, place to live etc. Excursions organized by schools for students, spending holidays outside their immediate home environment fall into this category. Tourism, therefore, opens the children to a wider horizon of life beyond their classrooms and home environment.

According to the operations of the universal basic education programme in Nigeria, most children (from age 5 to 14 years) are expected to spend over half of their working day in educational institutions. It is therefore necessary to ensure that part of their spare time is used for relaxation and refreshing after the days work. However, the present economic condition of the country has created a scenario whereby every available opportunity is used for income generating activities by households. Some children finish from school to assists their parents in the markets or on the farms getting home

later in the evening to do domestic work, eat and sleep, sometimes not having opportunity to do their home work. This study was therefore carried out to examine the recreation and tourism experiences of children involved in agricultural activities in households.

Objectives of the study

The general objective of the study was to examine the recreation and tourism experiences of children involved in agricultural activities in Ogun state of Nigeria. The study specifically

1. examined the personal characteristics of the children;
2. determined the children's level of involvement in agriculture and;
3. examined the recreation and tourism experiences of the children;

Hypothesis

H_o: there is no significant relationship between the children's level of involvement in agriculture and their leisure experiences.

METHODOLOGY

A multi- stage sampling technique was used in the study. A classification of the 20 local government areas (LGA) in the State into urban and rural led to the random selection of three local government areas. Based on the fact that about 63.72 percent of the Nigerian population lives in the rural area (NPC, 1998), a ratio of two to one for rural and urban areas was used. The local government area hosting the State capital (Abeokuta south) was selected to represent the urban area while Obafemi-Owode and Odeda local government areas represented the rural areas. Fifty percent of the political wards in each area and ten percent of the communities in each ward were randomly selected. A random selection of a child each (ages 5 to 14 years) in twelve households in each community were sampled for the study. Sixty households were selected in each LGA and a total of 180 children were used in the study. The study was conducted in late August-September to cover a period of 6 months of the agricultural season.

Children's level of involvement in agriculture was measured in hours at the interval level. Frequency and percentages were used to present the results of the study. Pearson product moment correlation analysis was used to test the hypothesis of the study at the 0.05 level of significance.

RESULTS AND DISCUSSION

Personal characteristics of children

Table 1 shows the personal characteristics of the children interviewed. Majority (68.9%) are males within the ages of 10 and 14 years (83.3%). This reveals that male children are likely to be more involved in agricultural activities than females. Furthermore older children also likely to be more involved in agricultural activities than the younger ones. Data

on the educational level of the children reveal that majority (98.3%) were enrolled in formal education. The higher percentages (40.6%) were in the junior secondary school followed by those between primary 4 to 6 (28.3%).

Period of agricultural involvement

Period of time children get involved in agricultural activities among the few (44.4%) i.e. 80 of 180 who do on weekdays reveal that majority (62.5%) do so between the hours of 4 and 6 in the evening and also finish within this time frame (66.3%). Table 2 also reveals that those who go on weekends do so mostly in the mornings between 6 and 10am (94.2%) and return by 4pm in the evenings (76.3%) but the higher proportion of this return by 12noon (40.5%). This arrangement makes ample time available for most children to have time for recreation as the weekend evenings (beyond 4pm) are free from agricultural activity. Since majority also does not get involved during weekdays it makes more time available for recreational activities during weekdays.

Children's level of involvement in agriculture

According to the Nigerian labour Act of 1974, a young person under the age of 16 years is prohibited from working for a long period of 4 consecutive hours and from working for more than 8 working hours in any one day. Based on this and a seven day working week, hours of child work was categorised into low, moderate and high involvement. All the children fall into the low category with a mean of 5.76 hours and a standard deviation of 2.92 hours. Thus they spend less than 14 hours weekly for agricultural purposes. This implies that children have some spare time to them selves after their educational activities, which can be harnessed for leisure activities.

Recreational experiences of the children

Games

Most (92.8%) of the children have opportunity to play games during the week though at various level. Majority (40%) as seen on Table 3 are opportuned to play games daily followed by those who do so between 4 and 6 times in a week (20%). This reveals that children despite their agricultural involvement still have opportunity to play games. Correlation analysis revealed a negative but non significant correlation between playing of games and level of involvement in agriculture ($r = -0.08$, $p > 0.05$) (see Table 4). This implies that their level of involvement does not affect their opportunity to play games with their friends.

Television viewing

Majority (65%) of the children view television weekly. However, this shows a higher proportion of children do not have opportunity for this kind of recreation than recorded for the other

two earlier discussed. Among those who do, those who view everyday are more (37.8%) followed by those who do so between one to three times weekly (18.9%). The fact that most of the respondents were from the rural areas where electricity supply may be a limiting factor may likely explain why this has a lower occurrence among the children. This will definitely affect the children's exposure and knowledge of their country and the world at large as they are kept in the dark about world events, fashion, news, issues of live etc. Correlation analysis shown on Table 4 revealed that children's level of involvement in agricultural activities does not hinder television viewing of the children ($r=-0.11, p>0.05$).

Tourism experiences

Cosmopoliteness

This has to do with travels outside the children's immediate home environment for any reason apart from holiday. Over half (53.3%) of the children as seen on Table 3 never had the opportunity to go beyond their home environment within the 6 month period investigated by the study. Among those who did, one visit/trip was the highest (29.4%), followed by those who went once in 3 months (8.3%). It is good to note that a few did so weekly (2.8%). This reveals a low exposure and interaction with the world beyond their immediate environment. Level of involvement in agriculture has a negative and significant effect on external visit of the children ($r= -0.18$, $p<0.05$) as seen on Table 4. This means that the more involved the children are in agriculture, the less time they have to go outside their immediate home environment. This is evidenced by the period of their involvement. They barely have free time after school hours and on weekends.

External holidays

A larger percentage of the children (57.8%) had spent their holidays outside their home. This case is better than in the external visits (cosmopoliteness) which may imply that farm work may be a limiting factor for external visits during the school sessions. Those who spent less than a week (23.9%) were the highest among those who go for holidays. This reveals that for one reason or the other parents or guardians do not release their children for external holidays and if they do, it is not for so long a time. Those who spent the whole holiday outside were in the minority (8.3%). Correlation analysis as shown on Table 4 reveals that the level of involvement in agriculture has a positive but non significant correlation with external holidays ($r= 0.06$, $p>0.05$). This means that children's level of involvement does not really hinder holiday outside the children's home but on the other hand their level of involvement in agriculture may be increased which may be as a result of need to cover more grounds for lost time spent in holidays.

CONCLUSION AND RECOMMENDATION

The results of the study reveal that children's level of involvement in agriculture in the study area is not beyond the legally accepted level. Involvement in agricultural activities for this age group of children (5-14 years) is also not inhibitory to their recreation and tourism experiences except for children's cosmopoliteness that was significantly affected at the level of significance considered in the study.

It is nevertheless recommended that schools should be encouraged to organize excursions for their pupils so as to make up for this deficiency in their education and development so as to ensure their sustainable involvement.

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Table 1: Personal Characteristic of the Children # = 180

	Variable	F (%)
A	**Sex**	
	Male	124 (68.9)
	Female	56 (31.1)
B	**Age (Years)**	
	5 - 9	30 (16.7)
	10 - 14	150 (83.3)
C	**Educational level of Children**	
	Non formal	3 (1.7)
	Primary 1 - 3	32 (17.8)
	Primary 4 - 6	51 (28.3)
	JSS 1 - 3	73 (40.6)
	SSS 1 - 3	20 (11.7)

Table 2: Period of Children's Involvement in Agricultural Activities

Variable	F %
A Period of children's involvement in agriculture during Weekday	
6 - 8am	27 (33.8)
8 - 10am	- (-)
12noon - 2pm	- (-)
2 - 4pm	3 (3.8)
4 - 6pm	50 (62.5)
Total	**80 (100.0)**
B Period children returns during Weekdays	
6 - 8am	27 (33.8)
8 - 10am	- (-)
2 - 4pm	- (-)
4 - 6pm	53 (62.5)
Total	**80 (100.0)**
C Period of children's involvement in agriculture during Weekends	
6 - 8am	42 (24.3)
8 - 10am	121 (69.9)
10 - 12noon	5 (2.9)
2 - 4pm	3 (1.7)
4 - 6pm	2 (1.2)
Total	**173 (100.0)**
D Period children returns during Weekends	
6 - 8am	20 (11.6)
8 - 10am	8 (4.6)
10 - 12noon	70 (40.5)
12 - 2pm	31 (17.9)
2 - 4pm	3 (1.9)
4 - 6pm	41 (23.7)
Total	**173 (100.0)**

Table 3: Recreation and Tourism Experiences of Children # = 180

	Variable	F (%)
A	**Playing games**	
	Never	13 (7.2)
	Weekends only	7 (3.9)
	1 - 3 times weekly	51 (28.3)
	4 - 6 times weekly	37 (20.6)
	Everyday	72 (40 0)
B	**Watching television**	
	Never	63 (35.0
	Weekends only	9 (5.0)
	1 - 3 times weekly	34 (18.9)
	4 - 6 times weekly	6 (3.3)
	Everyday	68 (37.8)
C	**Cosmopoliteness**	
	Never	96 (53.3)
	Once in 6 months	53 (29.4)
	Once in 3 months	15 (8.3)
	Once monthly	- (-)
	Twice monthly	11 (6.1)
	Weekly	5 (2.8)
D	**External Holidays**	
	Never	76 (42.2)
	Spent less than a week	43 (23.9)
	Spent a week or two	24 (13.3)
	Spent a month	22 (12.2)
	Spent the whole holiday	15 (8.3)

Table 4: Result of Pearson Product Moment Correlation

Recreation and tourism	r-valve	p valve
Experiences		
Playing games	- 0.08	0.270
Watching television	0.11	0.148
Cosmopoliteness	0.18	0.020
External holidays	0.06	0.430

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STUDENTS' PERCEPTIONS OF EFFECTIVENESS OF PEER APPROACH TO COUNSELLING BY TEENAGERS (PACT) IN COMMUNITY JUNIOR SECONDARY SCHOOLS IN FRANCIS TOWN.1 BOTSWANA

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This paper presents the results of a study that assessed the perceptions of students regarding the effectiveness of Peer Approach to Counseling by Teenagers (PACT) and their level of understanding of the concept of peer counselling as school going youths. The data for this study were obtained from 158 randomly selected students from eight junior secondary schools in Francistown, Botswana using validated and pre-tested questionnaires. The majority (67.7%) of the respondents indicated that there was maximum level of understanding of the role of PACT as a counselling strategy in schools. The respondents highly agreed that the PACT was achieving its objectives of : teens confiding on the danger of pregnancy (59.87%), increasing teen awareness of the decisions based on their values and value in society (61.34%), the consequences of their action (55.70%), providing relevant information about human development (63.34%) and situations (59.60%). The respondents slightly agreed with statements such as encourages the habit of cleanliness (43.83%), promoting of sexual abuse (43.31%), understanding peer pressure (43.31%), and danger of contacting HIV/AIDS (46.83). The study concluded that peer counselling is appreciated by majority of the people in the study area.

Keywords: perception, effectiveness, peer approach, teenagers

INTRODUCTION

The current Botswana educational policy advocates that schools' curricular should emphasize child centred education. Peer approach to counselling is a concept of child centred education used to address teenage socio-academic problems. In the 1980's and 1990's, Botswana like many other developing countries had serious teenage problems ranging from sexual abuse to pregnancy, alcoholism to drug abuse.

As a result, in 1990 the strategy called Peer Approach to Counselling by Teenagers (PACT) was formed in the northern part of the Country, Francistown under the umbrella of Young Women Christian Association (YWCA) with the aim of addressing teenage problems both outside and inside learning institutions. According to Bertsche (1998), a study conducted by YWCA found that teenagers in general were ignorant of the human anatomy, how their bodies work, and were not taught the fact of life. Culture in any partriachy society, prohibits elderly people from talking about sex in the presence of the adolescents thus making young people ignorant of what is happening in the world around them.

Peers are people of about the same age or maturity level with a unique role in human culture. Peer groups provide source of information and comparison about the world outside the family since children receive feedback about their abilities from their peer group (Hartup, 1976). The formation of PACT in the 1990's in Francistown city was a strategy to assist in youth problems through:

increasing teen awareness of their values and the consequences of their actions and decision based on their values.
Providing information on all aspects of human situations and development.

What is devastating in the school going youth of Botswana is that teenage pregnancy and other ill-socio academic factors still continue to course concern despite the intensive counselling conducted in schools and by community based organizations. The problem is, do teenagers understand the concept of peer counselling? Is the Peer Approach to Counselling by Teenagers (PACT) achieving its objectives of addressing teenager's problems affecting them in schools?

According to Corey *et.al.* (1997), peer counsellors can be used both in the classroom, human-relations courses and as part of the outreach programme of the schools counselling and guidance. Corey *et. al.* (1997) further noted that, given a proper training and supervision, peers can often be as effective in assisting fellow students like qualified counsellors and trained teachers of guidance and counselling. However, Makinde (1988) also advices that using peer counsellors in youths requires some training to improve on level of competencies since they could be deeply involved in their colleagues lives which may not be fruitful.

People are continually being warned that child centeredness curricular in schools could inevitably contribute to change in human behaviour. Farrant (1995) states that the professional character of teaching is under attack in certain quarters because it tends to place teachers in a position of power over children as a result of their influence

over what is taught in schools and their right to examine and award the certificates on which the children's careers depend.

THEORETICAL FRAMEWORK

Counselling education dates back as far as the time of Aristotle who made many significant contributions to what was to become the field of psychology. During this time the philosophers, priests or other representatives of the gods and religions assumed the functions of advising and offering counsel. The counselling component of guidance education engages in individual and small group counselling centred around concerns involving educational and vocational planning, personal problem solving and decision making, family problems, and other activities related to personal growth, prevention, consultation, and at times as a psychological educator.

Mwamwenda (1995), an educational psychologist, has observed that despite the important contribution school guidance and counselling can make to the social, academic and personality development of African school age children, it does not feature as an important aspect of the curriculum in most African countries. The author emphasized that it must be stated categorically that no school system in Africa can claim to provide quality education when the majority of its pupils have no access to guidance and counselling as an integral component of their curriculum.

In child centred education, teachers are certainly neither sentimental about pupils nor do they let them do as they like but they do respect their pupils individuality and try to enable each one to fulfill his potential (Farrant, 1995). Teenage pregnancy has contributed to many problems in schools and led to many female students dropping out of school. Majaha-Jartby (1984), postulated that part of the low participation of girls in upper secondary schools could be due to the problem of pregnancy. Ansu (1984), also indicated that peer group could be a source of influence for the African pupils especially during adolescence and in urban areas. This, the author said, would depend much on the value of group and the effectiveness of the mechanism for social control exercised by the group over its members.

Research in South Africa according to Boutler (1995), discovered that adolescents struggle with issues including self confidence and self-esteem, emotional stability, self assuredness, health, family influences, personal freedom, group stability and moral sense. It is therefore felt that the success of the counsellor in assisting pupils to resolve their problems will determine the quality of pupils the school system will produce who in turn

will contribute to national and economic development of their respective countries, (Mwamwenda, 1995).

In the Tonga plateau of Zambia for example, peers have had considerable influence on shaping the behaviour of young adolescents, and the Ngoni of Malawi, boys dormitories in schools provided preparatory school for the regiments in the warfares. These provided environment for gaining of physical knowledge, and learnt the art of getting on with peers without causing anti-societal ills.

Objective of the study

The general objective of this study was to describe perceptions of secondary school students in Francistown toward Peer Approach to Counselling by Teenagers (PACT). Specific objectives were to:

(i) determine the perceptions of students on the level of effectiveness in terms of achieving the objectives of PACT;

(ii) determine the level of understanding of the concept of peer counseling; and

(iii) describe the demographic characteristics of the group.

METHODOLOGY

The population of the study was 1,750 form two and three secondary school students in seven community junior schools in Francistown in the North Eastern part of Botswana where students were exposed to peer counselling. Using Creje and Morgan (1970) formula, a sample size of 158 students was needed based upon 5 percent degree of accuracy and 95 percent confidence level. The stratified random sample of students was used whereby 20 students selected from each list obtained from school. From each list provided, the researcher designed it in such that the student number 12 from the first name was picked for the sample.

Instrumentation

Questionnaire containing three sections was developed to source information as follows: demographic characteristics in terms of gender, age, educational level and membership to PACT; level of understanding of the concept of counselling by peers; and the effectiveness of PACT.

All parts of the questionnaire were assessed for content and face validity by a group of educationists in the Department of Education of the University of Durban-Westville. Reliability was assessed using a pilot pre-test procedure conducted using the fifteen (15) students in their final year of studying degree in education at the University of Durban-Westville. The reliability coefficient of the instrument was calculated and recorded to be 0.77 which was high enough.

Data collection

Data was collected by distributing 20 questionnaires to senior teacher guidance in each of he seven schools selected in the study to administer them. The twenty students purposely selected completed the questionnaire and returned to the teacher. The teacher who administered the questionnaire checked each questionnaire thoroughly when receiving them back from students for completion of all items in the instrument. The schools selected based on proximity were Donga CJSS, Setlalekgosi CJSS, Selepa CJSS, Selolwe CJSS, Goldmine CJSS, Montsamaisa CJSS, Tashatha and Mmei CJSS, all located in the Francistown city. The seven schools were the first to introduce PACT approach to counselling in the country, hence their use in this study.

Data analysis:

Simple statistics in the form of frequencies and percentage were used. The responses of students were categorized into demographic characteristics, level of students' understanding and ranking perceptions of students of the effectiveness of PACT.

RESULTS AND DISCUSSIONS

Demographic characteristics of the group

Table 1 shows that of the 158 students who participated in the study, 54.43 percent were female, 45.57 percent were male, 77.22 percent aged between 16- 18 years old, while 22.78 percent were between 1315 years. At least 80.38 percent were in form 3, 19.62 percent were form 2,84.18 percent of subjects studied were members of the Peer Approach to Counselling Team (PACT) while 15.82 percent were not members of PACT

level of understanding about the concept of peer counselling.

Table 2 shows that 67.7 percent of the 158 respondents had maximum understanding, 22.2 percent had minimum understanding and10.1 percent lacked understanding of the role of PACT in community junior secondary schools in Francistown.

Levels of effectiveness of teen counselling as perceived by students

Responses on whether peer counselling by teenagers was achieving its objectives are shown in Table 3. Results revealed that respondents agreed that PACT was achieving its objectives of: teens confiding on the danger of pregnancy (59.87%), increasing teen awareness of their values and decisions (61.34%), the consequences of their action (55.70%), decision based on their values and providing information on all aspects of human situations (56.20%) and development (63.34%).

The study shows that it is very effective

(59.87%) to discuss about the danger of teenage pregnancy. At least 13.3 percent of the respondents felt that collegial discussion about the danger of teenage pregnancy is not effective. Teenage pregnancy is a major social problem in Botswana which is difficult to deal with. It entails changing human behaviours and attitudes which unfortunately are deeply entrenched in people's minds.

The pregnancy statistics in some schools surveyed in this study show drastic decline in the dropout rates. For example, Donga community junior secondary school in 1998 had six students who left school, one dropped in 1999 and also one in the year 2000. Selepa community junior secondary school also shows that at least two students dropped from school in 1999 and 2000 while no students dropped in 1998. However, in some of the schools the dropout rates have been consistent even when the PACT programme is very active. Though from the study the students seem to perceive PACT to be playing a positive impact on their attitudes towards teenage pregnancy and other social ills, it can not be totally attributed to the change in student's behaviour towards teenage problems.

Alcohol like other drugs is a habit forming substance and habits formed from such substances are difficulty to change. This study has shown that peer counselling against taking alcohol and drugs is perceived with mixed feelings by students. This requires specialized counselling, and withdrawal from such habits is a process that takes a long time. These habits ultimately become both psychological and biological Counselling, however, is a psychological phenomenon.

The results indicate that the majority of students perceived understanding peer pressure as very effective (78.34%). Peer pressure, generally, is a major problem of teenagers, which the respondents seem to understand and appreciate the role played by PACT.

CONCLUSION AND RECOMMENDATIONS

It could be concluded that peer counselling is appreciated by the majority of people in schools and is found very effective. The respondents in this study show understanding of the approach to counselling.

It is recommended that;

1. Peer approach to counselling by teenagers (PACT) be integrated into the curriculum so that all students benefit from the positive effects it has.
2. The Ministry of Education should establish an office in all school with specialists in the needy fields.
3. Further research be carried out regarding how schools can utilize peer approach to counselling by teens (PACT) and any other organizations of similar approach.
4. Students' behaviour in schools should be studied regularly to

establish the trends for future decisions and plans.

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Table 1: Demographic Characteristics of Respondents

Demographic characteristic	Frequency	Percentage
1. Gender:		
Male	72	45.57
Female	86	54.43
2. Age Range:		
13 - 15 years	36	22.78
16 - 18	122	77.22
3. Level of Education:		
Form 2	31	19.62
Form 3	127	80.38
4. Membership of PACT		
Registered member	133	84.18
Not a member	25	15.82

Table 2: Levels of Students' Understanding of the Role of PACT

N = **158**

Level of understanding of the role of PACT in schools	Frequency	Percentage
Maximum	107	67.7
Minimal	35	22.2
Lacking	16	10.1

Table 3: Students' Perception of PACT Effectiveness

Statement based on PACT objectives describing perceptions of students regarding effectiveness of teen per counseling	Likert scale			
	4	3	2	1
1. Confiding to teen peer groups work better than confiding to teachers of guidance and counseling	46.38	21.73	15.22	16.67
2. Collegial discussion about the danger of teenage pregnancy gives positive results	59.87	17.83	8.92	13.3
3. Students' discussion among themselves leads to assertion	39.61	42.86	9.74	7.79
4. Students' counseling each other encourage the habit of cleanliness	43.04	39.87	10.76	6.33
5. Confiding to teen peer groups promotes understanding of sexual abuse	43.31	42.68	.7.64	6.37
6. Teen peer counseling against taking alcohol in schools is effective	29.01	25.93	20.99	24.04
7. Teen peer counseling against drug abuse in schooling is effective	31.45	32 70	19.49	16. 35
8. Advising student to understand the effect of peer pressure by colleagues is effective	43.31	35.03	14.01	7.64
9. Peer counseling on the danger of contacting HIV/AIDS work very well	46.83	29.11	13.92	10.13
10. Peer counseling on the danger of changing intimate relationships in more effective	53.55	40.12	00.00	6.33
11.Peer groups increase teen awareness of the consequence of their actions	55.70	28.30	10.10	5.9
12. Peer groups increase teen awareness of the decision based on their valves	61.34	30.00	15.00	4.33
13. Peer groups provide appropriate information about human situations	59.60	36.67	3.73	00.00
14. Peer groups provide relevant information about human development	63.34	20.15	9.00	7.51
15. Teen groups increase teen awareness of their valve in society	61.34	29.23	8.00	1.43

Note: 1 = Disagree, 2 = Slightly Disagree, 3 = Slightly Agree, 4= Agree.

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COMMUNITY-BASED CHILD CARE SERVICES: MACHINERY FOR THE DEVELOPMENT OF PRE-SCHOOL CHILDREN FROM POOR HOMES IN NIGERIA

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Women in Nigeria including those that live in urban slums and rural communities are under increased economic pressure to work outside the home. This is to enable them to generate income and contribute to meeting their family needs. Most of these women coincidentally are in their active child bearing age and as such they have infants and preschool children. The traditional kin group pattern of childcare assistance usually available to these women had become either inadequate or not available for their child care needs The urban mother from middle and high class is able to play the dual roles of being a mother and an employee successfully due to the availability of child care assistance such as day care centres/nursery schools, housemaids, nannies etc. There is need for new institutional structures such as community-based child care services to bridge the gap. Moreover, a high quality childcare service provides early stimulation which promotes total development of the preschool child. The paper examined the advantages of high quality care services to the development of children from poor homes and the productivity of mothers. The paper noted that a reliable and affordable child care service can be made available through joint efforts between Local Government Councils (LGCs), communities and mothers. It would also facilitate the laying of a solid educational foundation for disadvantaged preschool children from poor homes in our urban slums and rural communities.

Key words: *Child care services, pre-school children, poor home.*

INTRODUCTION

Children are desired by every couple in Nigeria. It is one of the main purpose for marriage. Children constitute a social and economic assets. They also represent the continuation of the lineage which is of great interest to Nigerian family. Children represent the future of the society. It is, therefore, important that Nigeria as a nation should contribute to the proper development of the young child especially those in urban slums and rural communities in Nigeria who are mainly from poor homes. Childcare is a process of attending to child needs and for protection in the immediate environment. In a broader sense, childcare includes sheltering, providing security, clothing, feeding, bathing and attending to sickness. It also involves nurturing, stimulating mental, physical, emotional development and socializing

the child to its culture. Nigeria is one of the five countries in the world with the largest number of children under the age of five. She ranks after India with 114,363,000; Pakistan with 230,040,000; Indonesia with 22,791,000; Nigeria has 21,134,000 (United Nations, 1990). The implication of this is that large proportion of Nigerian preschool children live in rural and urban slums areas. Children from these areas are usually almost exclusively from poor families. Poor parents have the least adequate supports for the development of themselves and their children. The burden of poverty afflicts all family members. Thus, early intervention through childhood education for these disadvantaged children could contribute effectively to improving their achievement in life.

PRESCHOOL PROGRAMMES IN NIGERIA

It was in the 1960s that early childhood education became popular in Nigeria. The reason for this could be two fold. First, as more women became more educated they sought employment outside the home. Thus, as increasing number of mothers became wage earners, there was also a corresponding increase in the number of infants and preschool children to be cared for outside the home. The second important reason why child care services are attracting attention in both developed and developing countries, like Nigeria, is the increasing recognition of the importance of early good group interaction and early child education to the proper and total development of the child. Most of the existing ones till date are organized by individuals or families as profitable enterprises. Only a few are owned by non-profit organizations like churches, mosques and fewer still are owned by groups such as women group (Awoniyi, (1977); Ogbimi, 1977); They are located mostly in urban areas to serve the child care needs of high and middle class working mothers who can afford the prices of the services.

"The National Policy on Education (N.P.E) section I listed the objectives of pre-primary education as follows:

(i) affecting a smooth transition from home to school;
(ii) preparing the child for primary level education;
(iii) providing adequate care and supervision for children while their parents are at work on the farm, in market, office;
(iv) inculcating in the child the spirit of enquiry and creativity through the exploration of their environment, playing with harmless and educative materials and toys, artistic and musical activities; teaching cooperating and team spirit, teaching the rudiment of numbers, letters, colours, shapes, forms, etc. through play; and;
(v) teaching good habits especially good health habits (N.P.E.; 1987).

The present day preschool programmes are both child and activity centred. The

differences in the different centres lie largely in the amount and the kind of guidance given by the staff. The educational goals are influenced largely by the work of the behaviorist which stressed stimulus and response conditioning on the one hand and piagets' work which emphasized the development of the thought process of the child. Also, the quality and the standard of some of the centres which were examined against the minimum criteria laid down by the National Policy on Pre-Primary Education (NPE) sections 3B, 3C and 3D:

(i) physical set up (space);
(ii) staff members and their qualification, staff to child ratio;
(iii) daily schedule;
(iv) furniture for the different room;
(v) indoor equipment and materials such as block building, science, house keeping, arts music, stories quiet activities, carpentry etc and;
(vi) outdoor equipment and materials were found to be below the recommended minimum standards especially in the following aspects: lack of qualified staff; inadequate physical space, and play materials for the number of children in the centres; inadequate child: staff ratio.

The main goals and objectives of establishing some of the studied centres according to the provides could be summarized as follows:

(a) to provide adequate and safe care for children of working mothers;
(b) to adequately prepare children for primary school education.

Most of the available centres are full day care programmes. They operated between 7 a.m. to 5 p.m. daily, Monday through Friday (Ogbimi, 1992; 1997; 1998; 2006).

The preschool year is a critical period for children to acquire certain competences and developmental milestone. For instance, they develop their large and fine motor skills through physical activities like walking, running, climbing, swinging, painting, scribbling etc. They develop social relationships or emotional growth and the ability to express their thoughts and feelings. Other major characteristics of preschool children include deep curiosity drive to know about the environment around them. Imagination and pretence are also the young child's way of sorting inputs he receives from the environment. These are best developed when there are friends and peers to share these experiences with. This is the type of the environment that is provided by good quality preschool programmes such as day care centres, nursery schools etc. (Clarke-Stewart *et. al.* 1983)

The way preschool programmes are designed depend on what is known about growth and development of young children. The overall goal of early childhood education is to provide a child with an environment, which will promote his optimum development at a period when growth is rapid and the child is vulnerable to deprivation of

appropriate experiences.

All aspects of growth are considered in the programme. Physical development, the development of social relationships or the capacity to enjoy and get along with other people, emotional development including confidence in and understanding of oneself as a person, such as self concept and self esteem, growth in the ability to express thoughts and feelings and manage impulses, intellectual or cognitive development and language competency. All these competencies and innate potentials of the young child needed to be nourished through guidance in a stimulating environment. This is the type of the environment that is provided by a good quality preschool programme.

Some of the basic assumptions and tenants underlying preschool programmes includes:

1. Every child is an individual.
2. The genetic constitution and environment together determine the course of development of the individual.
3. Intelligence develops as it is nurtured.
4. All aspects of development are interrelated.
5. Growth means change
6. Growth takes place in orderly sequences or stage.
7. Play is an important avenue for learning and for enjoyment.
8. Attitudes and feelings are important in learning and healthy personality development.
9. Behaviour is motivated by extrinsic and intrinsic factors.
10. Understanding, responsible guidance is necessary if the child is to develop his potential.
11. The development of a young child suffers if there are deficiencies in nutrition and health care, in attention and loving care. Also, an opportunity for play nourishes the childs' social, emotional and intellectual growth.
12. A healthy environment is the right of every child and the first responsibility of the community, the state and the nation.

CHILD CARE METHODS AVAILABLE FOR WORKING MOTHERS

There are three possible ways in which child care responsibilities are met generally by working women to whom most societies (including Nigeria) continue to assign child care responsibilities:

i. Provide care oneself, that is, mothers take the child to their places of work
ii. delegate care responsibility to extended family member living with her such as older siblings, mates or neighbours, extended family members; or to non-kin group like nannies and housemaids.
iii. Use an existing service like day care centres and nursery schools.

Mothers can use the three types within a period of time or in a day depending on the type that is available to her. In the past, when low-income mothers had to work outside the home during the day, extended family members or older siblings especially female children were readily available to take care of their infants and preschool children. Today, however, the Nigerian working mother faces a new challenge with regard to child care assistance brought about partly by the introduction of free compulsory education scheme formally called U.P.E. (Universal Primary Education) now called U.B.E. (Universal Basic Education). The female sibling is no longer available to help mothers with child care since she has to be in school. There is also the migration of extended family members from one city to another or rural to urban in search of jobs. These observable changes in Interactional patterns of the traditional Nigeria family system have left working mothers the sole care-taker of their infants and their preschool children (Ogbimi, 1997).

Poor women cannot afford maids. If, they are to pay for child care services, it will usually be done at great sacrifices. In order for these women to adequately meet the economic needs of their families as well as contribute their quota to the development of Nigeria, the gap created by these changes have to be substituted with a suitable alternative child care arrangements. In other words, the Nigerian poor mother of today needs adequate child care services for her infants and her preschool children. Also, child care programmes can be used to augment parental care in order to provide children from low income families an opportunity for educational and occupational benefits (Halpern, 1990).

The paper attempted therefore to examine the need for and the benefits of quality child care services for poor mothers and their preschool children. It addressed the following areas: the preschool programme, effect of quality of child care to the development of preschool children, impact of quality care on the development of children from poor homes and preschool programmes in Nigeria. The paper also suggested how quality child care services can be made available at affordable prices to working poor mothers and their preschool children in rural areas and urban slums of Nigeria.

EFFECT OF QUALITY OF CHILDCARE SERVICES ON THE DEVELOPMENT OF PRESCHOOL CHILDREN

The quality of childcare services can be measured by several components of the setting. Some of the following characteristics of childcare services have been noted to have contributed to the quality of care and as such are regarded as "Quality Indicators" in child care. These include: Curriculum

that features child centred development activities; responsive, sensitive and affectionate caregiving; limited group size; staff stability; parent involvement and comprehensive social services such as heath and nutrition (Bredekemp, 1990, Howe, 1990).

Some time in the 1970s child care services was discouraged because it was believed that the day-to-day separation of preschool children from parents could be disastrous to the development of a preschool child in the same way permanent separation would (Bowlby, 1973). There have been changes to this opinion. These changes was brought about by a number of research studies carried out in the subject area in the 1980s till date which revealed that the programme instead of being disastrous to the development of the child, had contributed positively to the development of the preschool child in the following ways:

1. It allows a child to function at his or her own development stage while being gently stimulated towards the next stage.
2. It allow children to learn about themselves and the world around them through play.
3. It helps children to develop the abilities to take care of themselves
4. It helps children to develop their sense of self.
5. It helps children to learn self discipline.
6. It helps children learn to get along with others.
7. It gives children the opportunity for non directed play as a way of getting various experiences.
8. It teaches children that behaviour in school changes in orderly, patterned and predictable manner.
9. It offers many children first opportunity outside their homes to associate with children of similar chronological age, different background and children with or without disabilities. This association enhanced the child's development of healthy attitudes towards themselves as well as other people that could affect their future learning.
10. It promotes cooperative play at the level appropriate for each age and helps children learn to share. Children also find an outlet for their tension and aggression. This is especially true of the tensions associated with sibling rivalry.

All these experiences provide children with the materials and experiences to help them explore their environment and grow emotionally, socially, physically and intellectually or mentally (Ogbimi, 1992; Davis and Thornburg, 1994; Smith *et. al.*, 2004;). The home and day care centres could be regarded as complementary environments for rearing children. This is because these experience help to prepare a child for a living in the family, school and the society.

IMPACT OF QUALITY CHILD CARE ON THE DEVELOPMENT OF PRESCHOOL CHILDREN FROM POOR HOMES

Children from poor homes are likely to be educationally deprived and as a result are disadvantaged when they enter primary school at the age of six years. An example of a programme oriented towards children from poor families was known as project Head Start in the United States of America. The project began in 1965. It was intended to serve as an intervention programme to provide compensatory education, that is education to compensate for a range of disadvantages in the environment of many poor children. The programme was organized for preschool age children based on the belief that the earlier intervention begins the better for the total development of the preschool child. A re-examination of this programme for low income children resulted in the project "Follow Through" in the 1970s. Some of the major findings of the impact of early childhood education programmes on preschool children included:

(i) significant reduction in the number of children who participated were assigned to special education class;
(ii) significant reduction in the number of children that repeated classes;
(iii) improved children's intelligent quotient (I.Q.) scores compared to children who did not participate in the programme;
(iv) resulted in low-income children being more likely than control children to give achievement oriented reasons for being proud of themselves. These results indicated very strongly that children who participated in these programmes were better able to meet minimal requirements of better later schooling than were children who did not attend such programmes. Thus, early childhood education for disadvantaged children therefore is a highly effective way of improving their achievements in life (Houlare and Oden, 1990; Howe, 1990; Lee *et. al.*, 1990; Clarke and Stewart, 1992; Campell and Ramey, 1993; Schweinhart and Weikart, 1993).

Several variables have been studied that reinforced the value of a good care to the child.

Cognitive Effect

Preschool children who were cared for in day care or nursery school setting demonstrated the following short-term effects on cognition. These children had:

- immediate and positive gains in intellectual performance (Thornburg *et. al* 1990; Campell and Ramey, 1993).
- higher scores on cognitive competency measure.
- enhanced pattern and level of cognitive development
- better preparation for entry into

school.

Long term positive effects on cognitive measures for disadvantaged child included (Clarke-Stewart, 1992; Lee *at. al.*, 1990).

- fewer repetition of class
- reduced placement in special education classes
- more regular attendance of school
- higher scholastic achievement
- greater motivation and commitment to school
- higher enrollment in post secondary education.

Socio-emotional effect

Socio-emotional benefits can contribute to increased quality of life in many domains. Short term social benefits for low-income children in child care services as compared to those who did not attend such programmes were as follows:

- better self esteem
- higher achievement motivation
- higher ratings in areas of social and emotional maturity
- better adjustment to school (Houlares and Olden, 1990).

Long term benefits for those who attended quality child care programmes included:

- loss antisocial behaviour and misconduct during later school years.
- lower rate of teenage pregnancy
- lower crime rate as well as less delinquent behaviour (Schweinhart and Weikart, 1993; Davis and Thornburg, 1994).

UNITED NATIONS CHILDREN'S FUND (UNICEF) ASSISTED DAY CARE PROGRAMME

The United Nations Children Fund (UNICEF) introduced UNICEF Assisted Day care Programmes on experimental basis in selected states of the Federal Republic of Nigeria of which Osun State was one of the beneficiaries. The programme was introduced in Osun State from 1990 to 1993 in selected Local Government Areas (LGAs): Ejigbo, Ede, Ife South, Ifedayo and Atakumosa. The programme was ran for a period of five years before handing it over to other stakeholders in the different benefiting communities for sustainability.

The aims of the programme amongst others were:

1. To provide affordable child care alternatives for working mothers in rural areas.
2. Promote the total development of rural preschool children by providing early childhood education.
3. Contribute to enhancing the productivity of mothers in their income generating activities either in the farm or off farm.

The day care centres were established in the different benefiting communities through the cooperative efforts of UNICEF, Local Government Councils and participating mothers. For example UNICEF provided play materials such as educative toys of different types, outdoor and indoor play equipment,

tables, chairs, teaching materials, books and training programmes in form of workshops, seminars for teachers/caregivers to improve their skills in working with the children. The Local Government Councils were responsible for the recruitment and payment of teachers/caregivers' salaries. Benefiting communities provided the physical space such as the building of classrooms, provision of mats and mattresses while participant mothers were expected to pay an agreed amount as a token per child per month for the purchase of dusters, chalk, broom and other needs of the centres. The programmes were community-based. UNICEF in collaboration with other cooperating units ran the programme for a period of five years and handed it over to other stakeholders in the different benefiting communities for sustainability.

Ogbimi (2006) carried out a study on UNICEF Assisted Day Care Centres located in Atakumosa East and West Local Councils. The objectives of the study were to find out if the facilities were still in existence in the communities that benefited in the selected study areas. Carry out on the spot assessment of facilities and the benefits of the programme to mothers and their preschool children. The results revealed that a large number of children are enrolled in the centres. It was also observed that the classrooms, furniture, indoor and outdoor equipment were in a state of disrepair. All the centres visited had crowded classrooms with teaching and play materials grossly inadequate for the number of children in each of the centres. There was inappropriate child: teacher's ratio. The reason for this according to caregivers/teachers was that the cooperating units the local councils, communities and participant mothers have not been able to adequately sustain the facilities since UNICEF withdrew from the programme.

The results also indicated that participant mothers most reported benefits has to do with the one that contributed to enhancing their economic productivity while the most reported benefit for children was that of children's safety, adequate care and the preparation of preschool children for primary education (Ogbimi, 2006).

CONCLUSION AND RECOMMENDATIONS

The advantages of early childhood institutions for preschool children and their families cannot be over emphasized. Thus, the availability of a stable and reliable childcare services of good quality in both rural and urban slums areas would foster learning and total development thus, enhancing the life chances of disadvantage children. For poor mothers, the type of childcare available to them is one of the most important factors that determine their level of productivity in their places of

work. Due to the economic situation in Nigeria, mothers in both urban and rural areas are usually engaged in income generating activities in both formal and informal sectors of the economy from dawn to dusk. Access to a reliable and affordable childcare service would enable them to participate effectively in their different types and places of work. There is need therefore to establish sustainable community-based childcare facilities that would fully integrate working mothers' reproductive and productive roles.

A suggested means of achieving this goal is to resuscitate UNICEF Assisted Day Care Centres currently located in benefiting communities and also by establishing new facilities in communities that are in need of such services. The programme can be sustained through collaborative efforts between Universal Basic Education (U.B.E) Programme, to take over the functions of UNICEF, local councils, benefiting communities and mothers. There should be a slight modification to the roles of the cooperating units as stated under the UNICEF Assisted Experimental day care centres to include the following: Universal Basic Education (U.B.E) programme is to provide play equipment, books, training workshops, seminar for teachers/caregivers to improve their skills in working with children and building of classrooms to house the children.

Local Government Councils should be responsible for the recruitment and payment of teachers/caregivers salaries, benefiting communities are to make available or provide the land to build or a building that can be renovated while mothers are to pay an amount agreed upon by all stakeholders as a token per child per month for the day to day running of the programme. Other services that can be provided within the child care programme setting include adequate immunization of children against infant killer diseases, health and nutrition education, including environmental sanitation. These child care programmes would not only address the child care needs of mothers but would also address the basic education and health needs of the children in rural communities and urban slums.

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A MODEL FOR RURAL YOUTH PARTICIPATION IN LOCAL GOVERNMENT: A SOUTH AFRICAN CASE STUDY

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This article explores the processes followed by the youth in the Khayalami Metropolitan Council in South Africa to secure participation in local government. The process is carefully analysed and some recommendations are made. Valuable lessons can be learned from these recommendations when applied in the context of rural youth participation in government throughout the African continent.

Key words: *Rural youth; participation*

INTRODUCTION

The problems facing rural youth in Africa are numerous. The main problem lies in unemployment and the lack of opportunities in agriculture and other rural job and sustainable livelihood activities. For rural youth to have a voice in policies of government, which directly affects them, active participation in local governance is required.

Local government in South Africa has undergone a wholesale restructuring since 1994. Local authorities have been transformed from their apartheid local council, passing through a period of appointed interim structures en route to the first democratic local government elections. At the same time as this process of institutional and electoral transformation has taken place, local authorities and community-based organizations have been attempting to articulate a new vision of developmental local government (Pottie, 1999: 1).

Instead of incorporating and co-ordinating the national youth strategy within the framework described in the preceding paragraph, national youth policy came to be formulated as a result of government prioritisation of the youth. Although a number of important policy documents affecting youth have been produced, there has yet been few implementation results (Malan, 1999b: 1). Various government departments are addressing some of the most burning issues, but research has indicated that only a systematic and holistic approach to the interrelated problems can produce effective results (Slabbert *et al.*, 1994; CASE, 1997; JEP, 1998).

The current attempt by some Metropolitan Councils to make provision for youth structures

functioning as an integrated part of council, might be seen as an attempt to rectify the omission of the youth from effective participative governance during the planning phases of the re-structuring process. This article attempts to evaluate the steps followed by the Khayalami Metropolitan Council (KMC) to establish a youth council, also to evaluate the proposed model for the formation of the youth council and its structures.

DESCRIPTION OF THE PROCESS

The Human Sciences Research Council (HSRC)

The project of researching and establishing a youth council for the KMC, was awarded to the HSRC. The approach followed by the HSRC, was needs-driven and therefore started with a survey that was designed to probe the youth to reveal their true preferences based on their needs. Upon completion of the 1997/98 survey among 1,500 young people of the KMC area, feedback about the findings was given during workshops in the 11 local council areas (Malan, 1999b:2). The research (Schurink, 1999) showed that most youth in the KMC area were in urgent need of information, training, guidance and other forms of empowerment. Life skills training that would address the most serious problems, such as health training and the prevention of crime, as well as economic empowerment and entrepreneurship training, were found to be most wanting. These findings were similar to those of the research conducted for the National Youth Commission at a national level (NYC, 1998).

Youth perceptions in the KMC area also reflected those of youth at a national level, according to another HSRC survey. Contemporary views of youth on, inter alia, economic matters and livelihoods, were collected by means of a national survey conducted for the HSRC in November/ December 1998. The survey involved a countrywide random sample of 2,182 respondents above the age of 18 years. The results showed that most young people were unhappy and pessimistic about their living circumstances but remained fairly optimistic about the future (Malan, 1999a).

Several surveys indicated that South African youth as a whole have strong opinions of their own and are assertive, thus, they remain a force to be reckoned with by decision makers. A survey conducted in 1992, together with various analyses (Slabbert et al, 1994) indicated that a small but significant section of the youth was highly militant before the political transition. Surveys since then have given the impression that this attitude has more or less "softened" (Malan, 1999b). In the face of growing unemployment, young women and men are critical and despondent about their own position

and future in the economy, yet they remain optimistic. In spite of their critical stance, they remain fairly loyal to the central government as an institution. They do however expect the, government to secure their future by fighting crime and creating employment, simply because they voted government to power (Malan, 1999b).

The loyalty of young (black) people to the central government has significant implications for possible government interventions and programmes aimed at youth. Youth have lost their trust in government elsewhere in sub-Saharan Africa and it is widely perceived that government as an institution has failed them (Mkandawire and Chigunta, 1997). The South African youth's dissatisfaction with their economic circumstances i.e. continued poverty and lack of jobs could lead to a highly explosive situation. This is especially true if it is considered that government is unlikely to provide jobs, amenities, quality education, RDP services, etc., within the short term.

At this stage, in spite of the hardships that they experience, youth have not lost their optimism and belief in the future. Even during the last years of apartheid (1993-1994) the Co-operative Research Programme: South African Youth (Slabbert *et al., 1994)* found that the majority of young people were overwhelmingly positive and optimistic about their role in the country's future, and subscribed to community- and family values. Building on the research findings thus far, the last phase of the research was completed using the participatory methodology, in particular that of the Participatory Learning and Action (PLA) approach. The views of young people, KMC officials and other stakeholders were obtained by attendance of a large number of planning meetings, report-backs in the regions, plenary workshops, informal discussions and training sessions.

HSRC research and information were also used to advise on the construction and contents of the Khayalami Youth Council (KYC) constitution and for guidelines on drafting a constitution for organisations (Malan, 1999b). The KMC undertook to address the problems identified through the research in a systematic way, guided by the KMC vision for youth development. This comprehensive and wellformulated vision/policy could serve as a model for other councils throughout the country.

The empowerment process

The major empowerment process was based on the following phases, each planned with full ownership and participation by the KMC youth:

(i) Research: youth profiles and needs per area

The field work for the research

was conducted by trained youth from the area.

(ii) **Feedback to communities**
At regional workshops young people and officials were informed about their area's unique profile regarding problems, perceptions and challenges.

(iii) **Mobilisation of all youth in the area: workshopping.**
The feedback opportunity was also used to get youth committees per area established. In addition plenary workshops for all young people of the area were held in February and May 1999, to plan the empowerment process. At the workshop on 27 February
1999 an Interim Youth Steering Committee was appointed to establish a Khayalami Youth Council.(KYC). Another plenary workshop was held on 22 May, to discuss the draft constitution for the new Council. Finally, the constitution was adopted at a youth summit on 24 July and the KYC launched on 11 September 1999.

(iv) **Establishment of youth representative structures**
Structures were established at three levels: the KYC, the local committees and the sectoral forums.

(v) **Establishment of a database of organizations**
Information on all organizations that register was captured in a database and made available at libraries and other public venues. Invitations for participation were extended to all youth by means of advertisements, posters, leaflets, etc. The database was fed into the HSRC's youth database, compiled by its PRODDER section. Six youth leaders were trained by the HSRC to conduct interviews with organizations, based on the questionnaire/registration form that was widely distributed.

(vi) **Training of trainers: leadership, planning and training skills**
In April 1999, 59 youth leaders, identified by the youth themselves, were trained by means of a university accredited course, 'Leadership, Planning and Youth Empowerment". They were trained by representatives of the Unit for Youth Development (UNYD), Vista University, in collaboration with YouthNet, a national youth training company with experience of training in a number of areas. The HSRC evaluated the training and did an impact assessment.

(vii) **Training of peer counselors**
A number of youth leaders who have been trained as trainers will also have to be trained as peer counselors. There is a clear need for young people to counsel peers

from their communities, in addition and collaboration with the counseling services provides by e.g. the social workers of the KMC.

(viii) Establishment of Local Youth Development Committees (L YDCs)

The Khayalami Youth Council constitution makes provision for the establishment of L YDCs in each of the 11 areas identified. The KYC will co-ordinate their activities and those of the regional youth organisations that want to participate.

(ix) Establishment of sectoral forums

In addition to the L YDCs, Sectoral Forums will address specific community needs in forums for Health, Economic Empowerment, Crime and Security, Community Service and Development, Education and Training, Arts, Culture and Tourism, Sport and Recreation, and Faith and Religion.

(x) Establishment of training and counseling programmes

In order to ensure continuity and address the vast needs of youth in the area, the KYC in collaboration with the KMC will have to establish training and counseling programmes on a continuous basis. Young leaders who have been trained as trainers should play a leading role in the presentation of these programmes.

(xi) Establishment of information centres and services

The research showed the widely felt need for information aimed at young people, dealing with anything from career planning to HIV to drugs and career opportunities. In the first six months after the national Youth Information Services (YIS) were initiated in 1999 it received 95, 000 calls (van der Wath, 1999). Information about YIS and the proposed national Youth Service and Youth Brigade was disseminated as part of the empowerment programme. Youth information centres need to be established at libraries, local authority offices and other accessible points that will offer easy access to information for all Khayalami youth.

THE FINAL MODEL

The model finally adopted by the KMC and the KYC is shown in Figure 1. From the Figure, it is clear that due consideration were given to the existing structures on national and provincial level. The important role of the National Youth Commission and the Youth Council as national bodies are acknowledged. It is also quit clear that the model has considered the importance of national youth policy, currently embodied in the White Paper on National Youth Policy (White Paper,

1999).
The research findings by the HSRC in respect of the needs of the youth were categorized and then aligned with the existing line functions of the KMC. The rationale behind this categorizations is to simplify the reporting-back structure of the 11 communities identified within the KMC area.

As can be seen from the Figure 1, the organisational structure was kept as flat as possible in order to avoid the creation of another bureaucratic structure and be caught up in politics instead of working for the youth. The constitution that was drafted and adopted by the KYC makes provision for the establishment of Local Youth Development Committees (LYDCs) for each of the eleven local communities within the KMC. These LYDCs report to the KYC that is to, in turn execute the L YDCs' projects by giving due consideration thereof within the objectives and strategies adopted by the KYC. In order to assist the LYDCs in their task, the constitution of the KYC makes provision for grassroots involvement through the so-called Sectoral Forums, one for each of the line functions identified through the planning process as being representative of the needs of the youth.

Finally, the model which, developed for the KMC, makes provision for the establishment of information services and centres. This in accordance with plans for the establishment of delivery mechanisms by the NYC, in order to communicate needed youth information within local communities. Lastly, it is important to note that all community youth organisations operating in the 11 local areas in the KMC were invited to fully participate in the new structure, and to give their input into the final model as set out in Figure 1.

GENERAL RECOMMENDATIONS

The HSRC evaluation (Malan, 1999b) of the processes followed thus far, was of an on-going nature and resulted in certain comments and recommendations, all of which are outlined below.

(i) OVERALL IMPRESSION

The empowerment process
Youth have taken over ownership and are mostly driving the core of the process. It seems that most of the black leaders in the KMC area are on board and committed. The first training programme is showing results and the basis for the establishment of the Khayalami Youth Council in September 1999 have been taken care of.

Recommendation 1: The youth empowerment and development process should continue as planned, and the KYC should take over full ownership of the process.

The role of the KMC
As stated in the interim evaluation, the

supportive role of the Khayalami Metropolitan Council was excellent. It will have to give attention to the possible role of a youth commission, the KMC's contribution to Sectoral Forums, youth contributions to budget negotiations and to financial and logistical support of the Khayalami Youth Council.

Recommendation 2: The KMC should continue to provide the KYC with financial and logistical support and guidance, but its role should change from an initiating to a mainly supportive agency.

(ii) THE PROCESS

Vital steps have been taken care of: wide consultation, open invitations, an effort to get everyone on board, a media campaign, a training programme, three plenary workshops, a constitution that has gone through various workshops, etc. The main problem still is that some major stakeholders, such as non-black youth groups, do not actively participate.

Recommendation 3: Continued participation by all stakeholders should be ensured by the KYC and all its structures, in collaboration with the KMC.

(iii) REPRESENTIVITY

Recommendation 4: The stakeholders should ensure that the KYC and all its structures are fully representative.

This aspect is so important that the main arguments from the interim evaluation report are repeated here. At various occasions it was made clear that some organisations and individuals still feel that their interests are being ignored. Excuses - however valid - for the following vital aspects of representivity are simply unacceptable in a democratic dispensation.

Ethnic/cultural/racial/language groups

As a model of the new, democratic South Africa the new KYC is simply not shaping up good enough. One white face among the leaders can be viewed as tokenism. White, Asian and brown young people should join the process immediately.

Recommendation 5: Members of all interim and KYC structures should personally keep on trying to get other groups than black young people actively involved.

Recommendation 6: The KYC should immediately launch a Rainbow Cultural Programme, including cultural festivals, sport and recreation days and religious get-togethers where all cultural and ethnic groups will actively participate.

Women

There are no women on the Steering Committee's task team (although some men tried to do something about it) and

all facilitators at the May plenary were male. Gender representivity should be treated as a matter of principle in all KYC structures.

Recommendation 7: Depending on the active participation of young women in particular KYC structures, each structure should determine a quota of female representatives in its executive, committees, etc.

The disadvantaged

A society, also a youth community, should eventually be judged by the way it cared and provided for those of its members who are most disadvantaged. Right from the planning stage its strategies should provide for the non-literate, the disabled, the poor, the unemployed, the homeless, the HIV victims and other people who are most in need of assistance and recognition. These people are not recognised in the draft NYC constitution.

Recommendation 8: The KYC and each LYDC and Sectoral Forum should have a section of its strategic planning devoted to the needs of the disadvantaged and should report about this section to the Annual Youth Summit.

(iv) RESEARCH

Youth profiles and database

The KMC is leading the way, probably in the country, as far as compiling a differentiated profile of its youth in the various areas is concerned. An updated profile is essential to identify needs, vulnerable groups, priority programmes, etc. The database should be updated at least once a year.

Recommendation 9: The KMC should ensure that the existing research does not get outdated and that the database is kept updated.

Research for sectoral programmes

Continued research will be needed to determine the basic needs, focus and scope of planned programmes aimed at addressing issues of health, crime, training, etc., in the area. The research should also pay attention to the development of models for these programmes and the evaluation of new programmes.

Recommendation 10: The KYC, in collaboration with the KMC, should initiate implementation research aimed at establishing effective sectoral programmes.

Comparative youth research

Participation in the projects outlined in section 8 above could directly benefit the Khayalami youth. It will ensure that the interests of unemployed youth, and the needs for youth training and an information infrastructure will receive attention in research.

Recommendation 11: The KYC and KMC should participate in comparative youth research and benefit from international and national research

results.

(v) TRAINING

Continued leadership and other youth development training

It has been pointed out that the leadership course organisers encountered wide-spread resentment from youth who felt it was very important to attend the course, but were prevented for reasons of a lack of communication and too short notice.

Recommendation 12: The existing leadership course should be repeated as a KYC course under Vista's UNYD supervision and with Vista University accreditation, but by also using trained Khayalami presenters.

The needs for training in the area are vast and diverse, and training programmes should also be extended and institutionalised over time. The range of training programmes compiled by Vista's UNYD (Appendix C) gives a good indication of the range of training possibilities.

Recommendation 13: The KYC and KMC should collaboratively ensure a continued training programme

The needs for peer counsellors who can advise their own age group on particularly sensitive matters such as sex, drugs, relationships with people in authority, etc., has been widely expressed. These counsellors should be selected from the ranks of trained youth

Recommendation 14: The KYC and KMC should collaboratively plan a youth counselor training programme as a matter of priority.

(vi) CENTRES, OTHER VENUES AND FACILITIES FOR YOUTH

Availability of venues and facilities

There is a universal need for venues where young people cannot only meet formally as organisations, but can socialise, play games, get information, etc. In the Winnie Mandela area, youth do not even have a venue other than the school to conduct formal meetings. In a number of areas, there are not enough sports, recreation and other facilities for youth. Access to basic facilities should be treated as the rights of young people and they themselves should start lobbying for these facilities through their structures.

Recommendation 15: The KYC in collaboration with the KMC should ensure that a needs assessment for venues and facilities is conducted by all L YDCs and that an action plan to address these needs is managed by the KMC.

Youth centres

Ideas for the establishment of at least a few model youth centres have already been considered and should be further explored. A typical centre could have a restaurant where young women and

men are trained as caterers and waiters, a coffee bar, an entertainment/games centre, a computer centre also used as an information centre, etc.

Recommendation 16: The KYC in collaboration with the KMC should ensure that a need assessment for shared youth centres is conducted by all L YDCs and that an action plan to establish such centres is managed by the KMC

(vii) INFORMATION DISSEMINATION AND CENTRES

Information dissemination

The urgent need for information dissemination and a model where it is linked to distance training are discussed.

Recommendation 17: The KYC and KMC should collaboratively ensure a planned programme of youth information dissemination, linked to distance training.

Information centres/telecentres

Specific centres are needed where information relevant to youth can be obtained. It is easy to convert all these centres into telecentres: a computer, printer and access to e-mail and the Internet is all that is needed.

Recommendation 18: The KMC should use its existing structures, such as libraries, to initiate youth information centres, preferable telecentres, without any delay.

(viii) THE WAY FORWARD FOR THE KYC

Recommendations regarding the summit where the KYC constitution will be approved have already been made and inputs by the HSRC have been made regarding the constitution. Following the example of the National Youth Commission, the KYC should immediately formulate a vision and mission, then draw up a list of strategic goals and action plans for each of these goals. The following areas (at least) should be covered in the strategic plan:

Co-ordination And Facilitation

To promote the coordination of youth development services and facilitate the creation of youth development programmes and initiatives.

Cap acity Building

To strengthen the capacity of the youth sector to enable it to effectively plan, design and manage youth development programmes and services and to facilitate and mobilise financial resources for capacity building.

Sectoral Development

T o promote the development of sectoral programmes and services, and facilitate the creation of sectoral training programmes and initiatives.

Monitoring

To monitor the design, implementation

and impact of KMC, local government and non-government policies and programmes upon young women and men.

Advocacy

To advocate on behalf of young women and men, and specific youth target groups, for relevant programmes, services and facilities

Research And Policy Development

To oversee and coordinate research into young men and women in Khayalami and the development of youth-oriented policies and programmes.

Public Awareness

To raise the profile of young women and men in Khayalami and their experiences whilst highlighting the work of the National Youth Commission and other youth development organisations.

Recommendation 19: A comprehensive and professional strategic planning exercise should be planned by the KYC, resulting in a multiphased plan of action. Individual action plans should be drawn up for each of the major objectives.

CONCLUSION

The process of establishing a youth council in the Khayalami Metropolitan area was initiated by the KMC, although the KMC was never commissioned by government to do so. The concept of youth council is however not new and the idea behind these structures and them becoming a part of local government has been part of an on-going process of negotiation between community youth structures, NGOs and the prioritisation of the youth by the national government.

KMC decided to employ the HSRC to conduct research among the youth within the KMC area, and specifically to determine the needs of youth in the KMC area. This step must be applauded as the single step taken by the KMC that probably resulted in the overwhelming successes of the processes followed thus far. The reason is that the process of establishing the KYC became a needs-driven process instead of being viewed by the youth as a top-down approach.

The second most important aspect of the process was getting full community involvement and consultation with all stakeholders. This consultative process, described in detail above, made it fairly easy to give the youth full ownership of the project - the third most important aspect resulting in the successful completion of the process of establishing the KYC.

In conclusion, it could also be said that a lot of emphasis was put on selfsustainability and in this regard the outcome of the training intervention by UNYD and HSRC showed that without any exception, youth leaders felt empowered and committed to manage

the newly founded KYC to the benefit of all youth in the area

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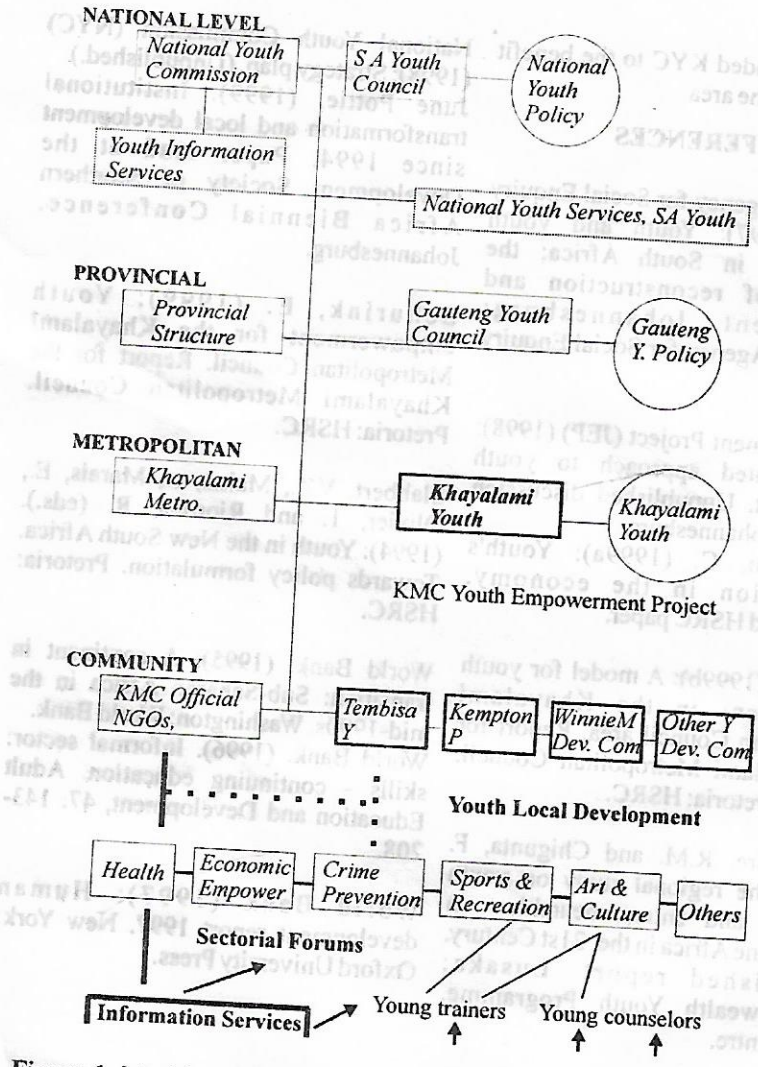

Figure 1: Model Adopted by the KMC and KYC

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COGNITIVE LEVELS OF TESTING BY AGRICULTURAL SCIENCE TEACHERS IN SENIOR SECONDARY SCHOOLS IN GABORONE, BOTSWANA

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The purpose of this research was to determine the cognitive levels of testing by agricultural teachers in secondary schools in Gaborone. A descriptive research design was employed in the study. The target population of the respondents consisted of all the twenty Agricultural Science teachers (5 Agricultural teachers per school) in the four secondary schools in Gaborone. Out of the four secondary schools, the purposive sampling technique was used to select three secondary schools from which the sample size was drawn. There were fifteen agricultural science teachers in the three secondary schools chosen and all of them participated in the study. The demographic characteristics of the teachers were determined using a structured questionnaire. Mock examination question papers written from 2001 to 2003 were obtained from the records of each of the fifteen teachers in the schools. A total of 305 mock examination questions (N=305) were found out which 170 questions (n =170) were selected using Krejcie andMorgan formula (1970) for determining sample size. The 170 mock questions (n = 170) used for the study were drawn from N=305, using the simple random technique. Similarly, the 74 BGCSE questions used for the study were randomly selected from the 90 questions set by the BGCSE board between 2001 and 2003, using Krejcie and Morgan (1970) formula. The Blooms (1956) taxonomy was used to identify the levels of cognition each question belonged. The findings revealed that the teachers in all the secondary schools tested their students at lower levels of cognition. It was also revealed that the Botswana General Certificate of Education board (BGCSE) set their questions at lower levels of cognition, indicating that the BGCSE syllabus must have influenced the teaching of Agricultural Science at senior secondary school levels in Botswana.

Key words: *Cognitive levels, Agricultural Science Teachers, Senior Secondary Schools*

INTRODUCTION

Teachers' task of assessing their students has become a greater part of professional activity. In most of the developed world, the responsibility for student assessment has gradually been shifted from the examination boards to schools (Sutton, 1991). It should be clear that any assessment innovation that will cost more challenge to local traditions can only be justified by firmly establishing its greater educational relevance. The aspect of educational relevance is concerned with whether or not a particular assessment method can be expected to reveal whether a student has certain qualities or can perform in a certain way. Another aspect is whether assessment method will allow

prediction of how the student will behave in other situations (Rowtree, 1987). However, there has been increasing interest in using individually administered tests of academic achievement either as a supplement to measures of cognitive ability or in some cases, to replace other measures. This interest springs mainly from a need to diagnose various learning abilities. One of the primary indicators that a learning disability is present is a larger than expected discrepancy between cognitive ability scores and achievement scores. At the secondary schools and college levels, centrally produced achievement tests provide evidence both for outstanding competence to serve as a base for advanced placement and minimal competence.

The interest in cognitive psychology also stems from critics of current educational practice, which relies heavily on objective paper and pencil tests as the sole criterion for measuring educational effectiveness. However, cognitive approaches to learning and testing in science recommended that science be presented and tested to students as a problem solving process, rather than simply as a knowledge acquisition process. Progress in science teaching should be assessed over a relatively length of period, as rapid changes in students are unrealistic (Brunning *et al* 1999). The purpose of assessment within a programme of learning is to collect sufficient evidence to demonstrate that a student has learned at least the required minimum percentage of the syllabus. If the programme of learning is also linked to an award system, a further purpose may be the achievement of formal recognition that learning has been acquired. In a competence based assessment system, the purpose of assessment is to collect sufficient evidence that individuals can perform or behave to the specified standards in a specific role. If this assessment is also linked to an award system a further purpose is formal recognition of successful performance (Fletcher, 2000).

Thorndike (1997) defined cognition as any process, which allows an organism to know and be aware, including perceiving, reasoning, conceiving and judging. There is, however a growing awareness among both teachers and society at large that, traditional type of examinations may be a poor indicator of students' skills and abilities. For example, the Commons Select Committee on Education and Science (CSCES) stated that school examinations are too academic and do not assess qualities highly valued by employers.

The board strongly supports the development of students' profiles containing records of academic, practical and personal strengths and weaknesses particularly social and communication skills, which

conventional examinations are not designed to evaluate. This opinion is widely shared and as a result, there is pressure on schools to develop a wider approach to assessment (Routledge, 1986). Research conducted by researchers in the past explicitly indicated that in order for students to be able to solve problems at the various levels of cognition, they ought to have been taught at various levels of cognition, so that they could solve problems of similar nature in real life context by applying the learnt information. In addition, research in cognition had also revealed that some agricultural teachers would teach their students at a lower level of cognition and have miraculous expectation that their students would perform at a higher level of cognition. Contrasting findings have also revealed explicitly that intelligence and creativity had a moderate correlation and thus responsible for problem solving ability. Research has also found out that agricultural instructors are less concerned about improving their cognitive level of instruction and student performance (Dlamini *et. al.* 1993).

However, there is a growing emphasis on using performance assessment to determine pupil's acquisition of the concepts they are taught in school. The argument made is that if pupils really grasp a concept, they can use it to solve real life problems. Assessing students' understanding of a concept through hands on demonstration is becoming more common and valuable in science (Airasian, 1996). Research has also revealed that teachers should not only test the knowledge his students have absorbed but should test the students' comprehension of the subject matter and his ability to apply the knowledge, analyse a new situation using processes he has previously used, create a new situation, create a new piece of information and evaluate (Ashworth, 1982).

The evaluation strategy that was developed by Routledge (1986) suggested that teaching effectiveness should be conceptualised and measured in terms of the degree to which an instructor has facilitated student progress toward achieving a course learning objectives.

According to his approach, instructors are required to clearly specify in advance of instruction the major learning goals of the course. In addition such an approach also calls for the development of a paper-pencil assessment instrument that is specifically tailored to synchronize with the learning goals of the particular course being taught. Traditionally, educational psychologists have referred to this type of approach to testing and evaluating as criterion referenced measurement or curricular-based assessment because it seeks to determine student's knowledge status with respect to a defined assessment

domain (Airasian, 1996).

Many arguments have been prescribed as to how examinations and test should be developed and comprehensively conducted. The psychologists believe that objective tests are adequate to test the amount of skills, knowledge and competence a student possesses after a successful completion of a programme while scientists feel that examinations should be problem oriented. However, the basic questions to be addressed are: what levels do agricultural science teachers test their students in senior secondary schools, and at what levels of cognition do agricultural science teachers teach their students? Does the cognitive level of testing by senior secondary school teachers in agriculture in Gaborone facilitate training at higher level of problem solving? And do the testing levels prepare students in agricultural science for the outside working world?

The general objective of the study was to determine the cognitive level of testing by senior secondary school teachers in agriculture in Gaborone. Based on this, the following specific objectives were developed:

(1) To determine the demographic characteristics of senior secondary school agricultural teachers in Gaborone.

(2) To determine the overall distribution of examination questions at the cognitive domain by Botswana General Certificate of Secondary Education (BGCSE).

(3) To determine the overall distribution of examination questions at the mock examinations at the cognitive domain by senior secondary schools teachers in Gaborone.

METHODOLOGY

The target population for the study was all the twenty agricultural teachers in the four senior secondary schools in Gaborone. The purposive sampling technique was used to select three senior secondary schools out of the four senior schools in Gaborone. There were 15 agricultural teachers in the three schools selected and they were all used for the study. In order to solicit for the demographic characteristics of the respondents, a questionnaire was used to collect data on the following:- 1. Gender, 2. Highest academic qualification, 3. Years of teaching, 4. Teaching loads, 5. Age, 6. Number of students in a class.

Mock examination question papers written from 2001 to 2003 were obtained from each of the fifteen teachers' records in the senior secondary schools, following a two - day visit to each of the schools. Krejcie and Morgan (1970) formula for determining sample size was used to

arrive at the sample size of 170 mock questions out of a total number of 305 mock questions found in the record in the 5 years under consideration. The simple random sampling technique was used to select the sample size of 170 questions, while Blooms (1956) taxonomy was used to identify the level at which each question was asked.

Names and addresses of the agricultural teachers were obtained from the Ministry of Education to control frame error. The questionnaire on demographic characteristics was personally delivered to all the teachers with a cover letter explaining the purpose of the study. The completed questionnaire was collected back after a week. A follow up trip was made to the school after a week to personally collect them from teachers who did not complete the questionnaire between the one week duration given to them. This helped to control non-response errors. Selection error was not a threat since all the agricultural teachers in the chosen schools were used for the study.

Similarly, a total number of 90 BGCSE questions set by the examination Board between 2001 and 2003 were collected from the national Library. The Krejcie and Morgan formula (1970) was used to randomly select the 74 questions used for the study. Frequencies and percentages were used to interpret the personal characteristics of the respondents. Also, frequencies and percentages and graphs were used to present the results of the levels at which the teachers set their mock questions and the levels at which the BGCSE board set their questions.

RESULTS AND DISCUSSIONS

Demographic characteristics of respondents

The results from Table 1 indicated that among the schools selected in Gaborone 66.7 percent of the agricultural teachers were between 31-40 years old, while 13.3 percent were 21-30 years and 41-50, years respectively. Only 6.7 percent were above 50 years old. Results also revealed that 60 percent of the agriculture teachers were males while 40 percent were females. About 87 percent of the respondents had degree in agricultural education as their highest academic qualification and 13 percent had masters degree as their highest qualifications. The data also revealed that 66.7 percent of the respondents graduated from Botswana College of Agriculture/University of Botswana, 13.3 percent from University of Swaziland and 20 percent from other Universities abroad. In terms of teaching experience, 33.3 percent of the respondents had 11-15 years in teaching agriculture, while 26.7 percent had 6-10 years.

Again, while 13.3 percent of the respondents had 16-20 years teaching experience in agriculture; also, 13.3 percent had 1-5 years of teaching in

agriculture. About 7 percent had 21-25 years of teaching experience in agriculture while about 7 percent also had more than 26 years of teaching experience in teaching agriculture. Also 53.3 percent O' Level of the respondents did agriculture as a subject at their O' level examinations, while 46.7 percent did not take agriculture as a subject at O' level. The data also revealed that 60 percent of the teachers had 31-35 students per class, 26.7 percent teachers had 36-40 students and 13.3 percent teachers had 25-30 students per class. The teaching loads was such that 46.7 percent of the teachers had 21-25 agriculture periods per week, 26.7 percent had 26-30 periods per week, 13.3 percent had 16-20 per week, 6.7 percent had 31-35 periods per week and 6.7 percent had 11-15 periods per week.

Determination of overall distribution of questions at the Cognitive domain by BGCSE

The data in Table 2 and graph 1 revealed that Botswana General Certificate of Secondary Examination board set most of their questions at the lower levels of cognition as follows: remembering level had 48.6 percent, questions comprehension level with 27 percent, application level with 13.5 percent and analysis with 10.8 percent. The results also revealed that Botswana General Certificate of Secondary Examination board does not set their questions at higher levels of cognitive domain, which are synthesis and evaluation.

However, the results indicated that the pattern of setting questions by senior secondary agricultural teachers in Gaborone, and Botswana General Certificate of Secondary Examination board were similar in the ways they both set questions at lower levels of cognitive domain. This trend emphasised the fact that students are not trained at BGCSE level to solve problems at places of work. A comparison between the figures in Tables 2 and 3 and graphs 1 and 2 confirmed similar patterns of setting questions. While under cognitive domain, BGCSE board had 48.6 percent of their questions at remembering level, mock test administered by agricultural teachers in senior secondary schools revealed that on the average, they also had 49.8 percent of their questions at remembering level. At comprehension level the BGCSE had 27 percent questions while on average, the three senior secondary schools for mock examinations had 33.5 percent questions. At application level, the BGCSE questions had 13.5 percent while the average figure for all three mock examinations for senior secondary schools was 7 percent. At the analysis level, the BGCSE questions had 10.8 percent while on the average, the three senior secondary schools mock examination questions had 8.6 percent. The synthesis level recorded 1.2 percent and 0 percent, respectively for mock examinations questions and BGCSE respectively. At the evaluation

level both BGCSE and the mock questions in three senior secondary schools had no (0%) questions.

Determination of overall distribution of examination questions at the mock examination conducted by senior secondary teachers.

The results on graph 2 revealed that in the mock examinations, senior schools in Gaborone tested their students mostly at remembering level. Naledi senior secondary school had 51.9 percent of the questions at remembering level, St Joseph College with 53.8 percent of questions at remembering level and Gaborone senior secondary school with 43.9 percent of questions at remembering level. The second level at which teachers set most of their question was comprehension level with 31.2 percent of the mock questions from Naledi senior secondary school, 32.7 percent of the mock questions from St Joseph College and 36.6 percent mock questions from Gaborone senior secondary school. The third level at which teachers set their questions was the analysis level with 7.3 percent for Gaborone senior secondary school, 9.0 percent for Naledi senior secondary school and 9.6 percent for St Joseph College. The last level for all the schools was found to be the application level with 3.8 percent of the questions for St Joseph College, 3.9 percent for Naledi senior secondary school and 12.2 percent for Gaborone senior secondary school. The only school among the senior schools, which had questions at the synthesis level, was Naledi senior secondary school with 3.8 percent of the questions. The data also revealed that all the senior secondary schools did not test their students on the evaluation level, which is the highest level of the cognitive domain.

CONCLUSION AND RECOMMENDATIONS

Conclusions

1. Almost 86. 7 percent of the respondents had a bachelor degree in agricultural education having graduated from Botswana College of Agriculture/University of Botswana.
2. A higher number of the agriculture teachers in Gaborone senior schools could be classified as youths as their ages ranged between 31-40 years old.
3. Majority of the teachers had taught agriculture for between 6-15 years.
4. The data also revealed that agriculture teachers had high work loads with higher numbers of students per class ranging from 31-40 students per class.
5. Agriculture teachers in Gaborone senior schools test their students at lower levels of cognitive domain, which are remembering level, comprehension level and few questions from application level and analysis level.
6. Botswana General Certificate Secondary Education examinations also test their students in agriculture at lower levels of cognitive domain.
7. It could also concluded that

agriculture teachers fashion their testing levels with that of Botswana General Certificate in Secondary Education for preparation of students to meet the examination requirements but not exposing them to problem solving at work.

8. Also the teachers could be seen as conforming with the BGSCE syllabus which is commendable.

Recommendations

1. Teachers should be encouraged to test their students at higher levels of problem solving through conduction of workshops and in-service training programmes.
2. Botswana college of Agriculture / University of Botswana as a higher institution should reinforce and update courses such as measurement testing and evaluation to enhance agriculture teachers' skills for testing agriculture at desired testing levels required by employees and other stakeholders.
3. Similarly, the BGSCE syllabus should be looked into to enable students learn and also be tested at higher levels of cognition.
4. Teaching loads for agriculture teachers should be reduced considering the fact that they are also school farm managers.

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Table 1: Demographic Characteristics of Respondents

Item	Frequency	Percentage
1. Age		
21 - 30	2	13.3
31 - 40	10	66.7
41 - 50	2	13.3
50 and above	1	6.7
2. Gender		
Male	6	40
Female	9	60
3. Educational Qualification		
Certificate in education	0	0
Diploma in agricultural education	0	0
B.Sc agricultural education	13	86.7
M.Sc and others		
4. Teaching Experience (Years)		
1 - 5	2	13.3
6 - 10	4	26.7
11 - 15	5	33.3
16 - 20	2	13.3
21 - 25	1	6.7
26	1	6.7
Name of Collage/University Attended		
UB/BCA	10	66.7
UNISWA	2	13.3
Others	3	20
Number of Students per Class		
25 - 30	2	13.3
31- 35	4	26.7
36 - 40		
Number of Period Taught per Week:		
Below 10	0	0
11 - 15	1	6.7
16 - 20	2	13.3
21 -25	7	46.7
26- 30	4	26.7
31 -35	1	6.7
Agricultural done at o - Level		
Yes	8	53.3
No	7	46.7

Table 2: Frequency and Percentage Distribution of Cognitive Levels of Testing at Botswana General Certificate of Secondary Education (BGCSE)

Cognitive Level	Frequency	Percentage
Understanding	36	48.6%
Comprehension	20	27.1%
Application	10	13.5%
Analysis	8	10.8%
Synthesis	0	0
Evaluation	0	0
	74	100

Table 3: Cognitive Levels of Testing at Mock Examinations by Agricultural Teachers in Senior Secondary Schools in Gaborone

	Cognitive Levels	No of Questions	Percentage
Gaborone S S			
	Remembering	18	43.9
	Comprehension	15	36.6
	Application	5	12.2
	Analysis	3	7.3
	Synthesis	0	0
	Evaluation	0	0
	Subtotal	41	
St. Joseph			
	Remembering	28	53.8
	Comprehension	17	32.7
	Application	2	3.8
	Analysis	5	9.6
	Synthesis	0	0
	Evaluation	0	0
	Subtotal	52	
Naledi S S			
	Remembering	40	51.9
	Comprehension	24	31.2
	Application	3	3.9
	Analysis	7	9
	Synthesis	3	3.8
	Evaluation	0	0
	Subtotal	77	

Figure 1: Frequency of Percentage Distributions of Cognitive Levels of Testing at BGCSE

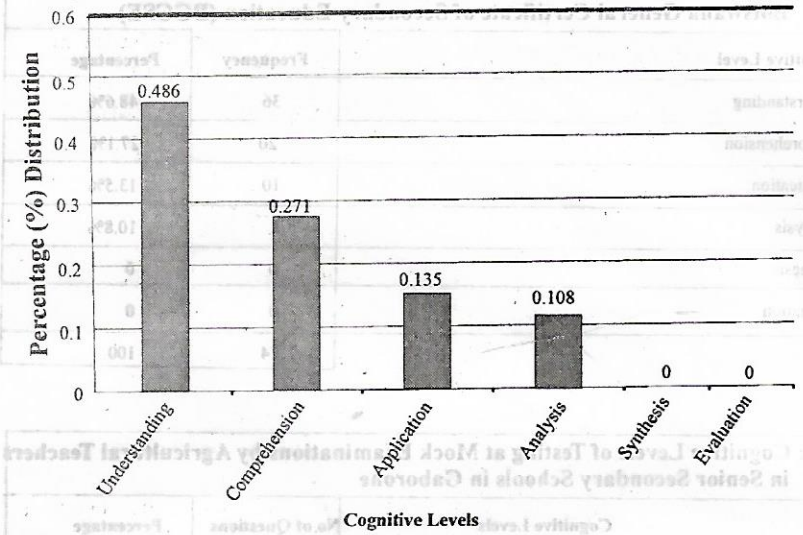
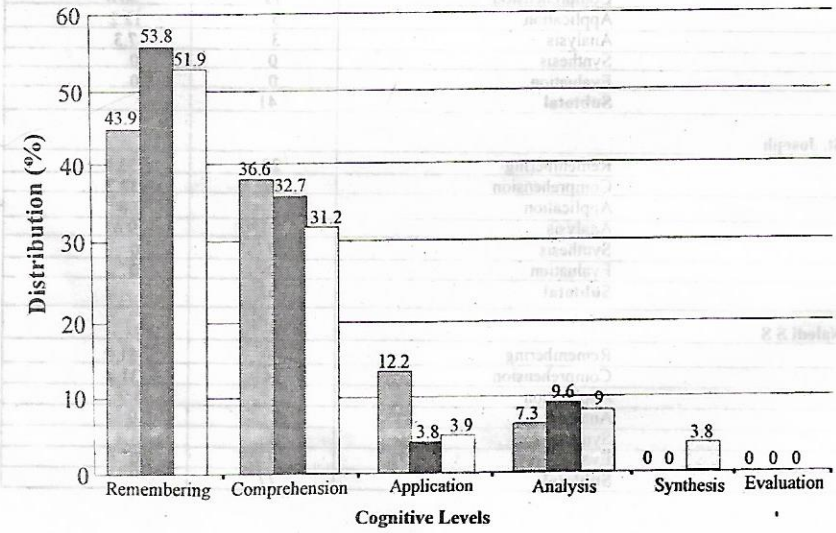


Figure 2: Frequency of Percentage Distributions of Cognitive Levels of Testing at Mock Examination in the Tree Senior Secondary School in Gaborone



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NUTRITIONAL STATUS OF THE NIGERIAN CHILD: THE ROLE OF DEVELOPMENTAL POLICIES AND DIETARY MODIFICATIONS

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This paper has reviewed the status of the Nigerian Children Nutrition. Children make up 47 percent of the total Nigerian population. Inadequate protein-energy intake, food in security, inadequate child care and health practices, poverty, varying levels of micronutrient deficiencies and lack of proper nutrition education are significant indices of the high level of child malnutrition. Child malnutrition in the country is however characterized by symptoms like stunting, wasting, underweight, anemia, morbidity and mortality. Dietary modifications have been shown to improve child nutrition.

***Keywords**: Nutrition, Child, Developmental policies, Dietary modifications.*

INTRODUCTION

Children make up 47 percent of the total population of Nigeria and many of them are chronically hungry and malnourished (The Nigerian Population Commission, 2000). A child has been described as any human being younger than eighteen years of age. (Bartikuv, 1993). Nutrition plays an important role in child's development of a healthy life style and therefore pivotal in whether the child reaches optimum growth and development. Good nutrition is a right guaranteed for children in the convention on the right of the child. This International agreement combines all right equally, economic, social, cultural, political and civil rights (FGN/UNICEF, 2001).

Various nutrition surveys have emphasized the existence of hunger and malnutrition in Nigerian children (Omololu, 1972). Under nutrition, malnutrition and micronutrient deficiencies are the major forms of malnutrition in the Nigerian children.

The determinants of child nutrition are multifaceted and include complex bio-social and behavioral determinants affecting child's feeding and caring practices. Nutrition is linked to those forces and factors that determine the degree to which human beings are able to obtain the food and nutrients they need. Inequity, poverty, food inadequate security, health services, environment under-development, as well as mal-distribution. (Galpados *et al.*, 1988).

Malnutrition may be either primary or secondary. Primary malnutrition is caused by inadequate intake of calories

or nutrients in relation to the body's requirement and may be due to faulty food selection, lack of money to buy food or actual food shortage. Secondary malnutrition results from any interference with ingestion or absorption or from stress or other factors which increase the body's requirement (e.g. Trauma, growth, infection) or the destruction or exertion of nutrients (mal-absorption syndrome, diarrhea and vomiting etc) (Waterloo, 1992).

Nutritional deficiencies are another factor contributing to the high rates of morbidity, mortality and disability in Nigerian children. Children Malnutrition is reported by the National Health Management Information System as a direct cause of death in about 2 percent of infant and under-five age groups mortality.

Malnutrition is a pathological condition brought about by the inadequacy or over consumption of one or more of the essential nutrients necessary for survival, growth and reproduction, as well as productivity at work. (Marek, 1992).

There are different types of malnutrition, of which the most important are protein-energy malnutrition (PEM) and deficiencies in critical micro-nutrients such as Vitamin A, iron, iodine and zinc. Other types of malnutrition, such as obesity, which were of marginal importance in the past, are becoming more prominent, with resultant complications of hypertension, cardiovascular disease and diabetes, as a result of over-consumption of the wrong types of foods and the adoption of sedentary lifestyles (Nnanyelugo *et. Al.*, 1992).

A wide range of factors result in malnutrition, appearing in combination, reinforcing each other to cause morbidity, mortality and disability. The most important direct factors include poor feeding practices and /or shortfalls in food intake, as well as illness. Conditions such as diarrhea can result in a sharp reduction in the absorption of essential nutrients, while malnutrition reduces resistance to diseases, potentially creating a vicious cycle that can be extremely dangerous to children. A poor food intake, aggravated by loss of nutrients from vomiting, diarrhea, mal-absorption and fever over an extended period, lead to nutritional deficiencies with serious consequences for the growth and immune system of infants and children, leading to increased morbidity and mortality. The data available on the regional prevalence of diarrhea, under-nutrition and under-five mortality show a strong interaction among all three, with each of them far more prevalent in the North than in the South of Nigeria. Nutritional deficiencies can also have a synergistic relationship with other key illness-affecting children, such as malaria, acute Respiratory Track Infections and measles (FAO/WHO 1992).

UNDER NUTRITION

The starting point for an assessment of the nutritional status of children is the measurement of growth, using anthropometric indicators. There are three anthropometric indicators of growth: stunting, wasting, and underweight. Each of which may be mild, moderate or severe. If the deviation is less than 10 percent below normal, it is referred to as being mild, when 10-20 percent below normal, it is moderate, and more than 20 percent below normal is severe. (FMOH, 1996).

The1993 Nutritional survey reveals that for stunting, the survey showed an increase from 1990 to 1993, followed by a decrease in 1999. Overall, during this period, stunting declined from 43 percent to 34 percent (Fig.1). In the case of wasting, there was a gradual upward trend throughout the period, from 10 percent in 1990 to 16 percent in 1999. Finally, the data for underweight show a decline from 36 percent in 1990 to 31 percent in 1999. The rates of wasting and stunting remain very high, and especially so in the North. The increase in wasting, which reflects short-term deficiencies in nutrition, suggests a sudden worsening of food insecurity, due to a sharp accentuation of poverty. (FGN/UNICEF, 1994; FGN/UNICEF, 2001. While in Fig. 3, the most recent nutrition and food consumption survey in Nigeria (2001-2003) show that 28-30 percent are stunted and underweight while 8-10 percent are in the category of wasting.

The 1999 FGN/UNICEF Multiple Indicator Chester Survey reveals that under nutrition is more prevalent in rural than urban areas, particularly with respects to the proportion of children underweight (34 percent compared with 22 percent) (Fig 2). There are also striking regional disparities, with the North East and North West in a much worse situation than the South East and South West of Nigeria (FGN/UNICEF, 2001). The rates of stunting vary from 44 percent in the North to 42 percent in the South West, (see figure 2).

International data on under-nutrition in under-five children, reveals that Nigeria is in a better position for stunting than the average for Sub-Saharan Africa, but worse off with respect to wasting (Fig. 4). However, compared with a more developed country, such as South Africa, Nigeria has much worse indicators for both wasting and stunting. The rate of wasting, for example, is five times higher than in South Africa.

PROTEIN-ENERGY MALNUTRITION

One of the key factors leading to protein energy malnutrition (PEM) is inadequate consumption of energy, as measured by calories intake, and of proteins. Results of the 1993 Survey show that apart from the South East, where protein intake was 105 percent

and 100 percent of Recommended Dietary Allowances (RDA) for children aged 1-3 and 4-6, respectively, the other three zones (South West, North West and North East) showed average intakes below the RDA. In the worst case, is of 1-3 year old in the North East, the average protein intake was only 59 percent of RDA (FGN/UNICEF, 1994). This was in striking contrast with the fact that mothers in the North East consumed, on average 28 percent more than the RDA, whereas in each of the other three zones mothers had a shortfall in protein consumption. This must reflect problems in child feeding practices in the North East.

A supplementary study, (FGN/UNICEF, 1996), showed that only 26.6 percent of under-five children met their Recommended Dietary Allowances for energy, while 8.5 percent were mildly deficient, 46.5 percent moderately deficient and 18.5 percent severely deficient. The data showed that children's ability to meet their energy requirements increased slightly with age. For children less than 36 months of age, only 24 percent were able to meet their requirements, while this proportion increased to 29 percent for children aged 36 months or more, probably because the older children had greater access to starchy foods and cereals, which are high in energy. (Nigerian Population Commission, 2002).

Food poverty as judged by calorie intake below the Recommended Dietary Allowances (RDA) was widespread in both mothers and their children. There were distinct geographical differences in the pattern of food poverty, with the North West and the North East being worse off than the South East and the South West. Food poverty was also more pronounced in rural than in urban dwellers, and was highest of all among rural-dwellers in the North East. The age and income of the mothers were found to be key social-economic factors, which influences food poverty.

MICRONUTRIENT DEFICIENCIES

In addition to energy and protein, micronutrients are essential for the normal functioning of the various chemical and biological processes in human being. The micronutrients, which are of great public health importance is Vitamin A.

Vitamin A deficiency (VAD) Vitamin A functions primarily to ensure proper vision, maintenance of epithelial cellular integrity, immune functions and reproduction. Vitamin A deficiency (VAD), especially when combined with other nutritional deficiencies can become a serious threat to child survival. In mothers, VAD, especially in combination with zinc deficiency, contributes to intra-uterine malnutrition, leading to low birth weight or stillbirth. (FGN/UNICEF

1996)

VAD occurs when body stores are depleted to the content that physiological function are impaired, even though clinical eye signs may not be evident. Being fat soluble, Vitamin A is stored in the liver when intake is in excess of physiological need.

VAD is a major contributory factor to the high infant, child and maternal mortality in Nigeria. Mortality is significantly higher among children with mild xerophthalmia (night blindness). The high mortality rate among children with mild Vitamin A deficiency has been attributed to the severity of accompanying systemic conditions, particularly protein-energy malnutrition, respiratory infections and diarrhea. Total dietary Vitamin A intake has been found to be strongly and inversely associated with risks of diarrhea. Much higher prevalence is found in the North than in the South.

Available data from the 1993 PLC survey show that the prevalence of VAD in 1993 was 9.2 percent in children and 7.2 percent in mothers (FGN/UNICEF, 1994). This is heavily concentrated in the Northern part of the country, with rate of 17 percent in the North West and 12 percent in the North East for children under six years.

A supplementary study carried out from 2001-2003 (Fig 5), revealed that about 71.5 percent of children under five suffered from VAD. The problem of VAD is not restricted to children but also affects adults. The available data indicate that VAD prevalence in mothers' ranges from 2 percent in the South West to 15 percent in the North West, with serious implications for reproductive health. VAD is also likely to be one factor, along with onchocerciasis, contributing to higher rates of blindness in the North (FGN/UNICEF 2001).

The prevalence of VAD may be attributed to the prevailing food consumption pattern in Nigeria, particularly the variations in consumption of Vitamin A rich foods among population groups living in different ecological zones. These foods, especially, green leafy vegetables fruits and palm oil, are much more prominent in the diets in Southern Nigeria.

Some strategies for VAD control used currently in Nigeria include Vitamin A supplementation. Through the opportunity provided by National Immunization Days (NIDs). The fortification of key foods with Vitamin A is another control used. A steering committee involving the National Planning Commission (NPC), the National Agency for Food and Drug Administration and Control (NAFDAC) and the Standards Organization of Nigeria (SON), was established in 1996 and carried out a review of standards for flour (wheat and maize), sugar and vegetable oil,

including levels of fortification with Vitamin A. These products were selected on the basis of their importance in the National food market and food consumption habits of the population. In August 2000, the proposed standards were signed into law, making it mandatory for manufacturers to fortify these products with Vitamin A.

Iron deficiency anermia (IDA). This is defined as less than 11 mg. of hemoglobin per dl of blood) and is one of the world's most common preventable nutritional disorders. Iron deficiency may result from inadequate dietary intake, poor absorption, or excessive loss, especially as a result of severe hookworm infection, malaria or loss of blood. This is more likely to occur in early childhood, when the iron needs are high and the foods eaten tend to be a poor source of iron, and in women during pregnancy, when iron needs are also high. Periods of rapid growth, which occur during infancy, early childhood, adolescence and pregnancy, are always accompanied by an expansion in blood volume and thus increased iron requirements. (Aina *et. al.*, 1992). Deficiencies of iron therefore greatly increase the chance of morbidity, mortality and disability among young children and pregnant women.

In children, IDA cause potentially irreversible impaired mental development, impeded cognitive functioning during the critical years of exposure, reduced response to learning, stimuli, increased mental absorption (lead). In severe cases, increased risk of mortality during illness, especially in malaria episodes, because of the effect of the malaria parasites on red blood cells, which carry hemoglobin. (Grant 1989).

High levels of anemia in pregnancy, when not corrected by iron and folic acid supplementation, expose women to a high risk of mortality.

Data from the 1993 study, showed that the South East had the highest prevalence of IDA for mothers at 61.4 percent while the lowest prevalence was North West (11.6%). The prevalence rate for anemia among children was highest in the South East (49.7%) and lowest in the North East (11.1%). Food consumption and Nutrition Survey 2001-2003 also reveals that a total of 52.5 percent of the Nigerian children suffered from IDA (Fig 6). The best treatment of iron deficiency anemia is prevention (through the consumption of foods rich in bio-available iron), but, once it occurs, supplementation with iron and folic acid is the best treatment (FGN/UNICEF, 1994).

Iodine deficiency disorders. (IDD) Iodine deficiency is another major threat to the health of children and with an estimated 25 to 35 millions Nigerians at risk. Certain specific intellectual functions are particularly vulnerable to iodine deficiencies. (Bleichrodt *et al,* 1987). Banarasi *et al* (1996) found that

severely iodine deficient (SID) children were slower learners than mildly iodine deficient (MID) children.

The most directly evident manifestation of a relatively developed form of IDD is goiter, the enlargement of the thyroid glands. Historically, Nigeria had one of the highest goiter rates in Africa. The nationwide study on IDD, carried out in 1993, estimated a total goiter prevalence rate of 20 percent with considerable zonal variations. The prevalence rates were much higher in the South West (29%) and South East (27%) than in the North (13 %in both the North West and North East). IDD was found to be endemic in certain states, with particularly high goiter rates (over 36%) in Sokoto, Cross River and Benue. Other states with high prevalence rate (between 26 and 35%) were Oyo, Osun, Ondo, Edo, Kogi, Anambra, Enugu, Abia, Taraba and Adamawa. (FGN/UNICEF 2001).

The current control used in Nigeria to address IDD disorders is the introduction and implementation of a policy of Universal Salt Iodations (USI). This method has been proven effective in overcoming iodine deficiency Internationally. The Federal Government established a legal framework in 1990 requiring the iodation of all-salt produced in the country and banning imports of non-iodized salt. The required level of iodation was set by the Standards Organization of Nigeria (SON).

Some Nigerians consumed diets, which are high in goitrogens, especially in cassava consuming areas, while cultural practices in other areas cause the loss of the iodine content of soil.

Goitrogens are substances, which prevent the proper utilization of absorbed iodine by the thyroid glands. The only way to solve these problems is to sensitize local populations about the correct usage of salt and the importance of ensuring the adequate fermentation of cassava, which removes goitrogens.

Zinc deficiency. Zinc is gaining recognition as an important element in the proper development and maintenance of the foetus for normal birth weight, and also in mental development. Zinc functions primarily as a co-factor in metallo-enzymes and assists in the maintenance of the integrity of the cell. It works in synergy with other micronutrients to assure child survival. (UNU/IUNS 2001) There are no data on the prevalence of zinc deficiency in Nigeria at present and this gap should be covered by future nutritional surveys.

THE ROLE OF DEVELOPMENTAL POLICIES

The Federal Government of Nigeria resolve to reduce malnutrition has been well documented in the National Policy on Food and Nutrition.

The overall goal of the policy is to improve the nutritional status of all Nigerians with particular emphasis on the most vulnerable groups that is

children, women and elderly.
Using a multi-sectoral, approach, the strategies adopted include eradication of poverty, Improving food security, improving food quality and safety, enhancing care giving capacity as well as improving the provision of human services such as health care, environmental sanitation, education and community development.

There has been tremendous International assistance through multilateral and bilateral organization to the development of agriculture, food and nutrition, health, and other related sectors of the Nigerian economy.

This assistance is often in the form of resource-directed as the implementation of key programmes planned by the agencies. e.g FAO, WHO, UNICEF, World Bank, UNDP and UNESCO.

In 1974, the World Food Conference declared that within a decade no child will go to bed hungry, no-family will fear for its next day's bread and no human being's future and capacities will be stunted by malnutrition. (UNU/IUNS 2001). This is a tall goal, yet countries in Asia, East and Latin America are making progress. In Sub-Saharan Africa, the proportion of the population lacking adequate food has increased and almost doubled. This is related to poverty and agricultural food and nutrition policies operational in Sub-Saharan African countries like Nigeria. Strengthening the food production and Food Security in Nigeria is a prerequisite for improving nutrition in low-income families.

Food quality and safety:- Breastfeeding combines access to food, protection against infection and reception of loving care into a single activity. Simple pre-cautions in handling and processing of food can do much to keep food safe in the home. Unhygienic handling of food predisposes children.

Development Policies: These could be examined through economic growth, agricultural, health, environmental and population as well as urbanization and International economic environment. The influences of these policies on nutrition do affect the child. This may take place through one or all of the direct factors, namely food, health and care through their interaction with one another. Properly implemented developmental policies can increase income, and influences prices of goods and services, especially food. Policies can develop and expand such services as health clinics, crèches, schools as well as portable water supplies.

The right to adequate food derived from Article II (1) which deals with freedom from hunger and malnutrition, and Article II (2) which deals with International Convention on Economic, Social and Cultural Rights (ICESCR) emphasizes the right to adequate food

and nutrition imposes three type of obligation on states parties to the ICESCR. The obligations are (a) to respect (b) to promote and (c) to fulfill. Failure to comply with any of these three obligations constitutes violation of the right to adequate food. (UNU/IUNS 2001).

United Nations special session on children, in a declaration, stated that children must get best possible start in life. Their survival, protection, growth and development in good health and with proper nutrition are the essential foundation of human development. UN promised to make concerted efforts to fight infections diseases, tackle major causes of malnutrition, and nourish children in a safe environment that enables them to be physically healthy, mentally alert, emotionally secured, socially content and able to learn.

Household Level

The woman is the central figure for participating in development programmes meant to elevate the nutritional status of family.

Empowerment of women and children through formal and non-formal education allows them to participate actively in maintaining nutrition security at household level.

Educational Institution

Primary schools provide an attractive opportunities to reaching large number of children in the general population. By the time children enter into school they have acquired knowledge about eating and have developed food preferences.

However, since they continue to eat daily food preference, food acceptance patterns are continually modified. A school is a critical component of the social environments that can shapen children's food preference and eating behaviors and can therefore play a powerful role in helping to improve children's diet.

Health care givers

The provision of health and nutrition education to patients in the hospital is a valuable venue for improving child's nutrition.

Food Industries

The production of highly nutritious food which are marketed aggressively will create awareness and promote better nutrition.

DIETARY MODIFICATIONS FOR IMPROVED CHILD NUTRITION

Children learn about what to eat and why to eat and they receive reinforcement and incentives for eating from their families and the larger environment. Most of this learning occurs during children's routine mealtime experience in the absence of formal teaching. Adults need to repeatedly expose children to nutritious foods, provide them with opportunities to learn to like rather than dislike nutritious foods that are more consistent

with dietary guidelines.
Pre-school children vary in their food habits from day to day and from meal to meal. They like foods that are soft in texture; other favorites include beverages, snacks and fruits.
The pre-school year's are the best time for a child to start a healthful pattern of living and eating, focusing on regular physical activity and nutritious foods.

Nutrient requirements of children

The nutrient requirements for children is shown in Table 1. During the pre-school years, growth is at a slower rate and this accounts for decreased appetite and changes in eating behavior.

The following guidelines will ensure good child nutrition;

1. Give diet that contains a variety of foods in adequate amounts.
2. Increase energy level of diet by addition of fat.
3. Serve foods 5-6 times daily.
4 Limit consumption of sweet foods.
5. Provide dark green leafy vegetables, fruits, cereals, legumes, tubers and foods of animal origin.
6. Continue feeding even when a child is ill.

Food like milk and other dairy foods are nutrient dense foods providing abundant amounts of protein, vitamins and minerals necessary for children's growth and development.
Dairy foods have been found to provide 72 percent of the calcium, 32 percent of the phosphorus, 26 percent of the riboflavin, 22 percent of the vitamin B12, 19 percent of the protein, 16 percent of the magnesium, 15 percent the vitamin A, 9 percent of the vitamin B6 and 5 percent of the thiamin, in addition to appreciable amounts of vitamin D and niacin equivalents available in the food supply. Children have been found to like milk-based beverages. Ice cream, full milk, yogurt, etc.

Soybean, (*Glycine max L. Merrill)* is a versatile crop that is capable of processing both human food and animal feed. Because of its high quality protein of 40 percent and 20 percent oil, it has been used to fortify starchy staples to improve the nutritional value of the foods. Soybean based foods like soy ogi, soymilk, soy cheese, soy biscuits, have been found to be highly acceptable to children and been found to improve their nutrition. Food Industries like Nestle , produce Nutrend and Golden morn, which have soybeans in its formulation. Novel foods like soybean ice-cream, soy yogurt eat and soy chocolate bars have shown high acceptability in comparison with their dairy counter parts, (Osho 2003).

CONCLUSION

The paper has reviewed the status of Nigerian children nutrition and has concluded that children's malnutrition is one of the most significant global problems of the day. In order to resolve

this problem, human and material resources must be mobilized at all levels.

Based on research evidence the causes of childhood malnutrition in Nigeria include food insecurity, diseases, inadequate children care and health practices as well as poverty. Nigerian children suffered from under-nutrition, protein-energy malnutrition, micro-nutrient deficiencies which include Vitamin A deficiency, iron deficiency, and iodine deficiency. The existence of varying degrees of micro nutrient deficiencies has also been demonstrated.

Owing to the high level of protein energy malnutrition, increased consumption of dairy products and soybean-based products by children will ensure adequate protein intake. This will contribute to improved health and nutrition of the Nigerian child.

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Table 1: World Health Organization Recommended Daily Intakes for Children

Age Children	Body Weight (kg)	Calcium (g)	Iron (mg)	Energy kcal	Protein (g)	Vit. A[b]	Vit. D[c]	Thiamin (ag)	Riboflavin (ag)	Niacin (mg)	Folic Acid (mg)	Vit. B12	Ascorbic Acid
< 1	7.3	820	3.4	14	300	10.0	0.3	0.5	5.4	60	0.3	20	0.5-0.6
5 -10													
1 - 3	13.4	1360	5.7	16	250	10.0	0.5	0.8	9.0	100	0.9	20	0.4-0.5
5 - 10													
4 - 6	20.2	1830	7.6	20	300	10.0	0.7	1.1	12.1	100	1.5	20	0.4-0.5
5 - 10													
7 - 9	28.1	2190	9.2	25	400	2.5	0.9	1.3	14.5	100	1.5	20	0.4-0.5
5 - 10													

a As egg or milk protein; b As retinol

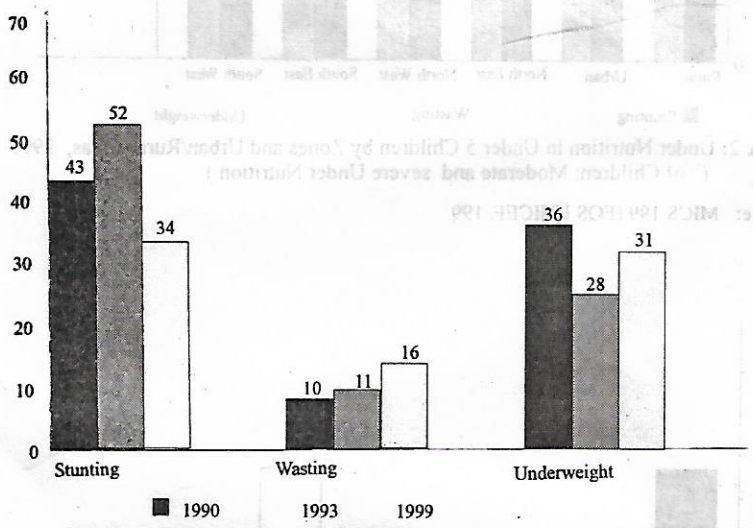

Figure 1: Under Nutrition in Under 5 Children, 1990 - 99
("% of Total: Moderate and Under Nutrition)

Source: NDHS 1990 (FOS/IRD/1992) PLC 1993
(FGN/UNICEF 1994) MICS 1999 (FOS/UNICEF 2001)

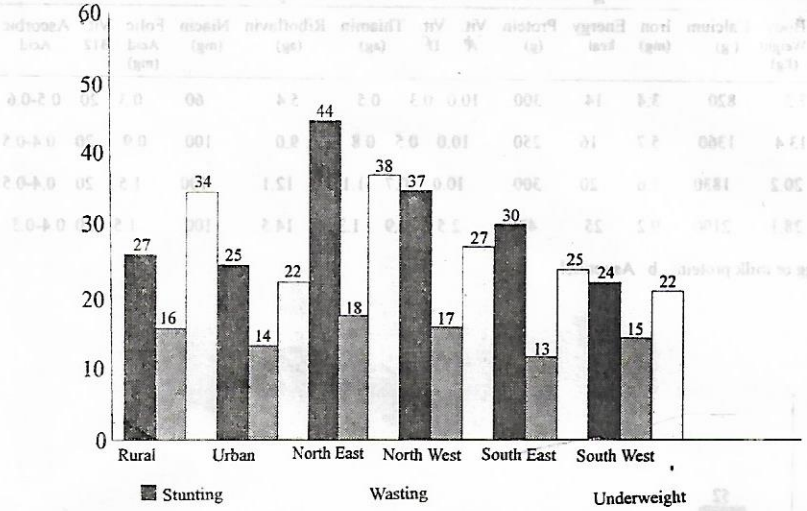

Figure 2: Under Nutrition in Under 5 Children by Zones and Urban/Rural Areas, 1999 (" of Children: Moderate and severe Under Nutrition)

Source: MICS 199 (FOS UNICEF, 199

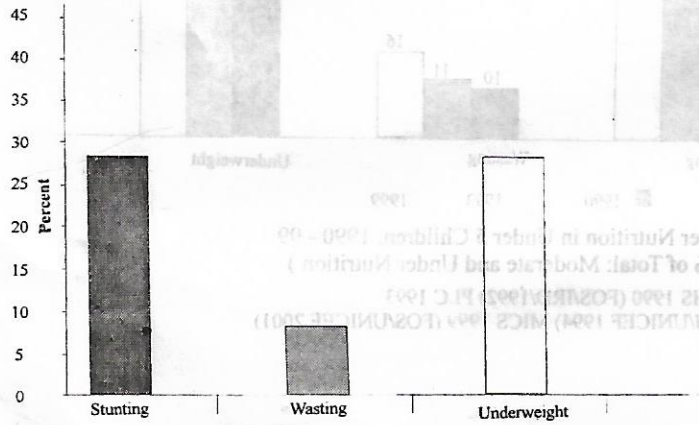

Figure 3: Percentage National Prevalent of Malnutrition in Children Under 5

Source: Food Consumption and Nutrition Survey 2001 - 2003

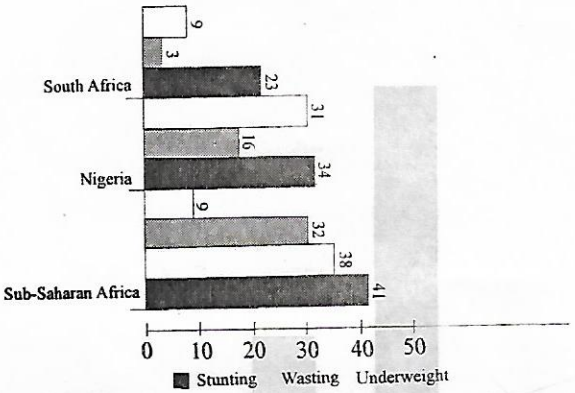

Figure 4: Under Nutrition in Under - 5 Children: Nigeria and other Africa Countries for South Africa and Sub-Sub-Saharan Africa (FOS/UNICEF 2000)

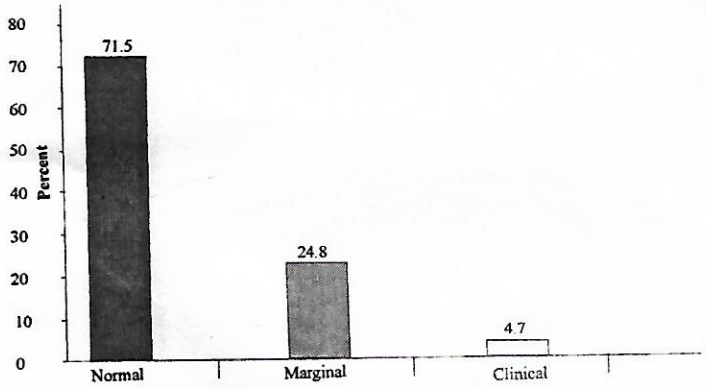

Figure 5: Vitamin A Status of all Surveyed Children Under 5 at the National Level

Source: Food Consumption and Nutrition Survey 2001 - 2003

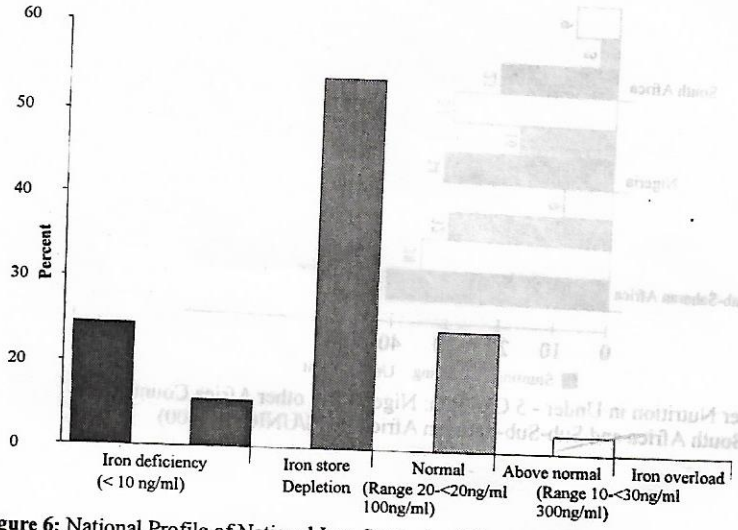

Figure 6: National Profile of National Iron Status in all Surveyed Children Under 5

Source: Food Consumption and Nutrition Survey 2001 - 2003

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BEE-HONEY PRODUCTION: A STRATEGY FOR POVERTY ALLEVIATION AMONG YOUTHS IN NIGERIA

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This paper addresses the issue of bee keeping as an extractive production process that can empower our youths, the household and the nation. It examined the level of participation of youths in beekeeping in odogbolu L.G.A. of Osun State, Nigeria. The list of beekeepers in the study area was obtained from a Non-Governmental Organization and the FADAMA II and respondents were randomly selected. The data were analyzed using descriptive and ordinary least square regression technique. The study revealed that youths participation in beekeeping in the area was rather low compared with the adult-beekeepers (29.52 %). When grouped the mean output for youth was 16.25liters while that of adults was 28.22liters per annum ,which indicates that the youths performance is lower. The regression analysis indicated that age, number of hives and colony has a positive and significant relationship with the volume of honey produced(multiple $R = 0.79$,adj $R^2 = 0.61$) The perception analysis carried out on the beekeepers indicated that youth involvement in the activity can help their parents out of poverty. Bees club should be established in our secondary school to empower our youth more in Bee - honey production.

Keywords: *apiculture, poverty, hive, windfall, household.*

INTRODUCTION

Nigeria, in spite of its buoyant resources exhibits most of the common characteristics of low income development nations. The continuous rising population growth and the wide gap between the rich and the poor with her dependence on primary products for exports (basically crude oil) contributed immensely to the widespread of poverty and rising unemployment (Todaro and Smith, 2003). The neglect of agriculture and the people in the rural areas from where the foods are got has caused massive movement of people especially the youths from rural to urban centers. This has resulted in high urban unemployment. With a population of about 127million in year 2000; and children, under 15years constituting almost 40 percent of the total population of developing countries (Todaro and Smith, 2003). This means that the level of dependency in Nigeria is very high. Hence, the need to address the nation's food security problem. In 1997, Nigeria was quoted as having 46 percent of its population under 15 years. For Nigeria to get out of the socio-economic problems posed by this type of age structure; steps have to be taken

to raise domestic food production and labour productivity. Torimiro *et.al.* 2003) confirmed that in order, to reduce absolute poverty and achieve good food security, various measures have been used globally to determine poverty levels.

The surveys carried out in Nigeria in 1996 by the Federal of Statistics indicated that about 67million people (66%) live below poverty-level in 1996. In the occupational analysis of poverty, it was found to be higher among farming households during the period 1980 and1996, than non-farming households. As two thirds of most developing nations live in rural areas, poverty was determined to reign most in the rural areas (Bihis-Tolention, 2003). Thus, the linkage between rural areas, poverty, agricultural performance and food security. Though age and education were indicated as making no significant differences in the poverty level of agricultural and non-agricultural household; the education of the household head and size of household was found to play a role in terms of the poverty status of farming households (F.O.S, 1999). It further stated that farmers with education have lower proportion of poor members; but the larger the household size, the higher the incidence of poverty. F.O.S (1999) indicated this severity of dependency; its effect increases as household increases in size. To increase farm production and earnings as well as reduce dependency, expected labour-resources have to be developed and improved. The youths have to be provided with opportunities to contribute to agricultural production. They are often overlooked due to their financial dependency on the family. Nigerian youths especially in the rural areas have very limited opportunities to develop their ability in order to acquire the skills, knowledge and right attitude required to make them more productive and competitive in agriculture. There is the need to prepare the young for the world of work; and income generating activities such as apiculture that can assist the youths and their households out of poverty.

Engaging the youth in the world of work, through various efforts may help in reducing the various vices often engaged in by the youths. More so the focus on agricultural training programmes as part of development strategies aimed at bringing about desired economic transformation. Bees in the Africa context require no feeding; they depend solely on plants for their food. They do not compete for resources; they are a free gift of nature. Ekemode and Bakare (2003) specified that to specifically target children and youths, programmes that raise women's income directly must be implemented. The need for the involvement of youths in beekeeping is here stressed as well as economic effect on the Nigerian youths. The purpose of this paper therefore is the determination of the involvement of youths in beekeeping, their level of

involvement if any, as well as beekeepers' perception of the involvement of youths in apiculture.

Youths have some potentials which need to be tapped for economic growth. Their role in economic development has been neglected. As a result, they engage in various other activities that are either harmful or beneficial. What is most dangerous is that some of these activities, if not well monitored at times land them into crime and other misdemeanors. Aside this, poverty is another major problem in developing countries. The extents of poverty differ from community to community; and household to household. Some are more affected than others. Above all, it is worthy to note that poverty is more pronounced in the rural areas than urban areas (FOS, 1999).

Youths are more affected by poverty, may be because of their high level of dependence on their parents. This goes further to affect their growth and development as future leaders. To curtail this, there is the need to tap the potentials embedded in them through skills development programmes such as beekeeping. Youth unemployment is very pathetic as stated by Orjioke (2003).That it has led to taking to crimes, cultism, prostitution and street begging, among others. Further, Okhiria *et. al.* (2003), while discussing effects social-economic changes' on Nigerian youths concluded that the effect of poverty and low income confronting many families led to the many social problems among the youths.

OBJECTIVE OF THE STUDY

The general objective of the study is to determine the level of participation of youths in bee keeping. The specific objectives are to:

(1). Identify the socio-economic characteristics of beekeepers in the area of the study.
(2). find out whether youths participate in beekeeping and their level of participation.
(3). Analyze the perception of beekeepers about the involvement of youth in bee keeping

METHODOLOGY

The study was conducted in odogbolu L.G.A. of Osu State, Nigeria. The population involves beekeepers in Odogbolu local government area (L.G.A.). There are ten beekeepers' groups in the L.G.A. The list of the beekeepers was obtained from a non-governmental organization (NGO) in the area and, the FADAMA Office in the study area. A well structured questionnaire was used; to solicit information basically on the socio-economic characteristics of the beekeepers. Eleven beekeepers per group were randomly selected at their meeting points. A total of one hundred and ten questionnaires were

administered, while one hundred and five were returned. The respondents were later sub-divided into youths and adults to determine some differences between the two groups. The study was conducted between August and November 2005. A descriptive analysis was adopted for the socioeconomic characteristics of the respondents using frequency counts and percentages while the ordinary least square regression analysis was carried out to determine some relationships.

RESULTS AND DISCUSSION

Respondents' Characteristics

Table 1 indicates the summary of some selected characteristics of the beekeepers in Odogbolu Local Government area of Ogun-State. The age range of the respondents varies between twenty-one to seventy eight years (21-78 years). Based on this, beekeepers within the age range of twenty-one to forty years are categorized as youths; while all those above forty years are regarded as adults. The youths form about 29.52 percent of the respondents, which indicates that youth participation in beekeeping, is low. The age distribution of all the respondents is moderately skewed while the over all mean age is 47.5years. (See ,Table 2). The low level of participation of the youths can be attributed to (a) the fear of being stung by bees (b) that only those who possess witchcraft can practice beekeeping. The result corroborates Kihwele ,Lema and Kagya's finding (1992) that young people refuse to join beekeeping because of the belief that, beekeeping is for those with witchcraft. (Kihwele et al., 1993a and 1995). This implies that there is the need to encourage young people into beekeeping as well as give adequate training in beekeeping techniques to youths. More than 85 percent of all the respondents had formal education. while less than 15 percent had no formal education (Table 1). This indicates that the farmers can easily benefit from extension services. They can then easily ready literature on beekeeping techniques that can improve their production, more so that education has been linked with productivity (Wu, 1977; Pudasaini 1983). The mean education of all the respondents is early secondary education for both youths and adults that is averagely they had spent 9 years of schooling; while their education ranged from zero to 16 years of schooling. It is negatively skewed (a_3 -0.55).This indicates the degree of asymmetry in the distribution of education.

The level of performance of the youths (Table 4) shows that the average number of hives owned by the youths is eleven (11) Kenyan top bar hives, with an average of five (5) colonies, while the adults have 16 hives with an average of 8 colonies. The annual mean quantity of honey produced by the youths is 16 liters/annum while the adults produced 28 liters averagely per

annum. An indication that youth performance in beekeeping in the area is low when compared with that of older beekeepers. The overall range of production was between zero and 100 liters per annum per beekeeper. This means there is still room for improvement on the part of all the beekeepers if given the necessary assistance. The expectation is that youths within the age structure of 21-40years being the active age group are to have a higher production level than their adult counterparts. The p-values indicated that the age, education and number of hives of the population is normally distributed (p. = 0.80; 0.86, 0.44) respectively

The regression result shows that the respondents' number of hives and colonies, education and age contribute to the level of performance of the respondents, but colony number contributed most (b = 1.84, while number of hives has (b = 0.31) and age (b= 0.02). Education level has an inverse contribution. This may be because the beekeepers have not being able to use their education for better performance possibly the educated beekeepers find it difficult going to their apiaries without assistance. There is thus the need for more seriousness with the business of beekeeping if we are to take a cue from Adjare (1995) which says honey is money. There is therefore the need for adequate research in this area to be able to link education with bee honey production as carried out in other studies (e.g. Wu, 1977). The number of hives and colonies, education and age variables accounted for 79 percent of the respondents production level (i.e. output) with R = 0.79. The immense contribution by colony number indicated that beekeepers (young and old) should strive to have more colonies, which means that they have to attend to their apiaries when necessary as well as interact with other beekeepers for improved knowledge (local and international).

There is also the need for adequate training on the techniques of beekeeping. Also, the variation within the age groups and their production levels was tested, the F test indicated that the, variance with in the age group for youths and their outputs is lesser than the variance within the adult age group and their production levels.(See Table 7) (F = 0.36 for age; F= 0.42 output with F critical as 0.58). That is the age distribution and outputs of the youths do not vary too widely; when compared to the variation among adult beekeepers..

BEEKEEPERS' PERCEPTION OF YOUTH INVOLVEMENT IN APICULTURE

Table 1 indicated fifteen perceptional statements that were presented to the beekeepers on the involvement of youths in beekeeping. A likert scale ranging from strongly agree to strongly

disagree was used. Of the respondents 80.9 percent strongly agreed that beekeeping is good for youth upbringing and empowerment, while about 10 percent feel it is not necessary involving youth in apiculture. This may be due to the general fact honey is nutritious; it develops the brain while it has some other healing properties (Kolawole, 1997). Also, 91 percent of the beekeepers strongly agree that youth engagement in beekeeping will generate more income for their households while empowering them for the future. The implication is that beekeeping as a business with the assistance of older children will go a long way in reducing poverty among rural households, which also indicates that rural youths need not migrate to cities for employment; there are ample natural resources for their family upkeep and sustenance.

With the aggressiveness of bees especially the African bee (Apis mellifera), 55 percent of the respondents strong feel that bees may harm youths if care is not taken, which means that adequate safety training programmes for youths will assist in allaying their fear of bee stings. If given the required training they will likely perform better than the adults (parent-beekeepers) as they are the most active age group (21-40years) of the Nigerian population. Reduction in vices among youths through apiculture was strongly agreed upon by 65 percent of the respondents. The belief is that beekeeping can make them very busy, either that they are constructing hives, on their apiaries baiting, or harvesting and or processing honey. A beekeeper will always find something doing round the year because during rains, certain plants must be planted for bees to feed on. . This means that youths can be kept busy through beekeeping, thus reducing crimes such as cultism, robbery and thefts, alcoholism, prostitution among them. The result also indicated that apiculture programme will not disturb them academically (61.9 percent of the respondents agreed to this); also that apiculture like agriculture should be included in the school curriculum (80.5 percent) both at the secondary and tertiary levels.

CONCLUSION AND RECOMMENDATIONS

The research findings bring out the fact that youths participate less in beekeeping in the study area .A large percentage of the beekeepers are middle aged .The mean age of the respondents is 47,5yaears;when separated the mean age of the youths is 33years while that for adults is 53 years. The implication is that the low participation of youths in beekeeping may impede the development of the sector as the most active age group is not contributing its quota. This then calls for the creation of awareness among youths and the economic gains that can be derived from beekeeping. In the determination of the level of participation of youths in

apiculture, the study reveals that youths performance in terms of their mean output to be lower than that for adults (See Table 7).

The variance within youth beekeepers' output is lesser than that for adult beekeepers. The wide gap between the two groups output requires that youths be introduced to the various techniques of beekeeping through skill acquisition programmes as organized by Ogun state government, though beekeeping is yet to be included. Such capacity building programmes will go a long way in reducing the gap between youth and adult beekeepers as well as make the youths realize their potentials. Also, it serves as away of reducing vices and the various misdemeanors that go with that age group. On the perception of beekeepers on youth involvement in apiculture the result indicated that beekeeping for youths is of vital importance especially in the rural areas for household's sustenance and youth empowerment.

Based on the findings, policy measures aimed at using apiculture as one of the strategies of combating poverty should be put into place as beekeeping is a forgotten resource that needs to be tapped. Which means that a food policy that recognizes beekeeping be enacted to improve beekeeping as well as protect the beekeepers.

Government policy should aim at empowering the beekeepers, especially the youths as a way of encouraging beekeeping, while they take the profession as a poverty coping strategy. There is also the need to include apiculture in the school curriculum at the secondary and tertiary levels, as this will go a long way equipping youths to facing future challenges. More research is also required in this area to be able to generate more data on apiculture for appropriate policy formulation.

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Table 1: Beekeepers' Perception about Children' / Youths' Involvement in Beekeeping

S/N	Perception Statement	SA	A	D	SD
1.	Getting children/youths involved in the practice Of beekeeping is good for upbringing	85 (80.9)	10 (09.5)	5 (4.8)	5 (4.8)
2.	Aggressive nature of bees may harm youths	10 (09.5)	25 (23.9)	20 (19)	50 (47.6)
3.	Such children and youths engage in beekeeping will generate income for their households	96 (91.4)	8 (7.6)	1 (1)	0 (0)
4.	Beekeeping will make children useful to themselves later in life	20 (19)	80 (76)	2 (2)	3 (3)
5.	Beekeeping for children/youths will remove some vices from their midst by spending their leisure on productive activities	26 (24.6)	75 (17.4)	3 (3)	1 (1)
6.	Children/youths' involvement in beekeeping will make them develop business skill	5 (5)	81 (77)	2 (2)	17 (16)
7.	The programmes may not give them enough time for academic work	17 (16.2)	13 (12.4)	10 (9.5)	65 (61.9)
8.	Such children youth wiil be a good source of labour for their parent beekeepers	93 (88.5)	7 (6.5)	5 (5)	0 (0)
9.	Beekeeping is not necessary for children and youth	3 (3)	0 (0)	12 (11.4)	90 (85.6)
10.	Beekeeping is a way of creation jobs in rural Area for youth	45 (43)	60 (57)	0 (0)	0 (0)
11.	Beekeeping is not meant for urban children and youths	80 (76)	20 (19)	2 (2)	3 (3)
12.	Every person should participate in beekeeping	15 (14.3)	10 (9.5)	74 (70)	6 (5.7)
13.	Beekeeping should be include in primary ans secondary schools agricultural education program	95 (90.5)	5 (5)	3 (3)	2 (2)
14.	Safety tips of beekeeping should be taught regularly to children/youths	100 (95)	5 (5)	0 (0)	0 (0)
15.	Beekeeping should be included in the national agricultural program of country	96 (91.4)	8 (7.6)	1 (1)	0 (0)

Source: Field survey (2005)

Table 2: Frequency Coefficients of the Respondents

Variable	Mean (x)	Standard Coefficient of Deviation(s)	Skewness(Cs)
Age (years)	47.52	13.33	0.23
Sex	1.28	.45	1.86
Education	2.48	1.56	1.88
Mar. Status	1.18	.76	0.71
Occupation	3.42	2.02	2.85

Source: Field survey (2005)

Table 3: Age Structure of the Respondents

Age (years)	Frequency	Percent (%)
21 - 30	8	7.62
31 - 40	23	21.9
41 - 50	34	32.38
51 - 60	19	18.1
61 - 70	15	14.29
71 - 80	6	5.71
Total	105	100

Source: Field survey (2005)

Table 4: Correlation Analysis

Coefficients	Age	Education	Marital stat.	Religion	Occupation	Sex
Age	-	0.103	0.478	0.041	- 0.105	- 0.35
Education	0.103	-	0.05	n.s.	n.s.	n.s.
Marital stat.	0.478	0.05	-	n.s.	n.s.	n.s.
Religion	0.041	-	n.s.	n.s.	n.s.	n.s
Occupation	- 0.105	0.634	n.s.	n.s	n.s.	n.s.
Sex	- 0.35	0.1	- 0.2	- 0.11	0.12	-

Source: Field survey (2005)

Table 5: Honey Productivity by type of Hive/Vegetation Zones

Hive Type	Vegetation Zone		
Modern Hives	Savanna	Rainforest	Swamp
Top bar. Hives	16.737	19.425	14.352
Langstroth Hives	26.925	28.666	-
Traditional Hives			
Beekeeping Hive	10.757	-	-
Hunted Honey Hive	13.770	-	-

Source: Field survey (2005)

Table 6: Honey Productivity by type of Bee Hive

Average yield per colony (litres)	Years			
	2002	2003	2004	2005
Kenyan Top Bar Hives (KTBH)	10	10	12	16
Glass Kenyan TBH	5	108	10	10
Langstroth Hive	35	35	40	40
Cement Hives	8	12	15	20

Source: Field survey (2005)

Table 7: Quality of Colony by type of Beekeeper

Type of Beekeeper	No. of Colony	%
Hobby beekeepers	Less than 10	60
Part - time beekeepers	10 - 25	10
Full - time beekeeper	25 - 100	20
Professional	101 - 1000	9
Large - scale professional beekeeper with shop and employees	100	1

Source: Field survey (2005)

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IMPLICATIONS OF HEALTHY LIVING ENVIRONMENT ON CHILDREN COGNITIVE DEVELOPMENT IN NIGERIA

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This paper examines the implications of healthy living environment on the cognitive development of a child and how it can affect the intellectual and systematic development of inherent qualities in them. Healthy living environment includes proper housing, balanced nutrition, adequate medical care, stable physical and mental condition. The theory of cognitive development was thoroughly examined. The relationship between healthy environment and academic performance of the Nigerian child was also discussed. It emphasizes that every Nigerian child deserves a healthy living environment, and this does not just mean providing adequate physical care and facilities for the child but meeting his/her numerous social, emotional and intellectual needs. It is therefore recommended that concerted actions by government, Non-governmental organizations, parents, corporate bodies and the entire community to ensure provision of a comprehensive personal health services for the Nigerian child in order to achieve the country's plan for sustainable development.

***Key words**: Healthy living, environment, intellectual, cognitive, development and children*

INTRODUCTION

A child is any person under the age of eighteen (18 years). According to UNICEF (1998), a child means any child below the age of eighteen. The United Nations International Children and Education Fund on the rights of the child also adapted the use of age in describing the child as any human being below the age of eighteen years. Viewed from the cultural perspectives, child according to Fadipe (1970) can be define as one who is still under parent custody and control without an independent means of livelihood. Therefore, a child is an individual who is under the age of eighteen and under parent care.

Hereditary, developmental and environmental factors had been identified as the major determinants of child personality (Tyler 1965 & Vincent 1961), Development lives in child include the development ability to think objectively. the ability to think quantitatively, social understanding the ability to use words to express and communicate thoughts and feelings, aesthetic sensitivity, ability to use one's physical powers effectively and a responsible behaviour (Taylor, 1982). Therefore, parents have the desire and responsibility to provide an enabling environment by providing good nutrition and moral values as well as

teaching their children the best way to become responsible and reliable adult and future leaders.

Health is one of the biggest problems in Nigeria, and universally accepted that a healthy nation is wealthy nation. According to Grant (1983) the child is the nucleus of the family and the health status of the child is very much an indication of the state of his environment. It is also said that "The child is the father of man" and so, laying a good educational foundation and maintaining a healthy living environment for the child are very important ways of guaranteeing national growth and a buoyant overall development of the country.

Behavioural scientists such as (Maslow, 1970, Grant, 1983 and Jones and Brazedale 1994 and slavin 1999) have often stressed that the life (i.e. development, growth, learning and maturation of any individual is dependent on two major factors namely: heredity and environment. Heredity here is defined as what the individual is, that is his inherent qualities; while environment is taken to mean what the individual has and experiences. According Bamigbala (2001) environment inhibit inherent qualities in an individual. In his own contribution, Durojaiye (1974) asserted that in preparing the child for good living, certain factors are to be considered. This includes the understanding that:

(1) the mental development and indeed general development of the child is affected by the amount of early maternal stimulation received and the level of Nutrition.
(2) the climate in the home that is general feeling, tone and mood.

This is determined by the emotional maturity and feeling of security of the parents. Thus, homes with seriously disturbed children are known to have several of the following characteristics according to Onasanya and Oladipupo (2001).

1. chronic marital discord
2. deficient warmth and responsiveness to children's needs;
3. an imbalance of child attention vis-a vis the need of the whole family;
4. inappropriate discipline;
5. extensive use of punishment; and
6. inconsistent and or unrealistic demands.

Parents of healthy children on the other hand are characterized by genuine love, affection and tenderness that is aroused by the helplessness and dependence of the child and his responsiveness to their care and ministrations in the same vein, the parents of a healthy child respect the child as an individual who has his own rate of growing, learning as well as his own peculiar life style, ambition and aspiration (Olawale, 2001).

Healthy living environment for the

child therefore involves building the foundation of basic trust in the child by meeting the infants basic needs. Olawale (2001) postulates that the development of basic attitudes of trust or distrust is the first of a series of critical alternatives arising during infancy. He went on to indicate that if the child's needs are well attended to, he becomes aware of the world or his environment as a good, stable, safe and encouraging place to be a place to be trusted Children whose basic psychological needs have been inadequately met are usually difficult to motivate.

The fact that a happy, harmonious and supporting homes play's a vital part in scholastic progress cannot be over-emphasized. According to Bamigbala (2001) and Mojoyinola (1997) intelligence is now being considered as something that grows and developed in the course of a child's active involvement and experience in his environment. In order for a child to develop mentally and emotionally both of which are required for scientific learning; he needs stability in the early years of his life. This is stability that a well organized home supported by both parents can provide and in which the mother takes an active, purposeful and personal interest in the child.

THE CONCEPT OF COGNITIVE DEVELOPMENT

It is important to understand that human development is all embracing. It refers to all-round qualitative behavior of a person. Aspects of human development include physical, intellectual, social, emotional and moral. For a person to develop, he has to grow and mature first. In order words, development is the climax of growth and maturation. The theory of human development as postulated by Jean Piaget, a Swiss philosopher and biologist, who later became an eminent psychologist will be used to explain what goes on in the process of development. Much of Piaget contributions to the theories of human development and intellectual functioning is the result of his keen observation of his three children.

According to Piaget (1972), intellectual development occurs in stages and there are four broad stages. The stages are hierarchical or sequential though they overlap, the ultimate goal of intellectual development is the development of thought, abstract thinking and reasoning. Each stage is characterized by a particular behaviour by way of intellectual functioning. All children in different culture passes through the stages in same sequence although at earlier or later years than Piaget children. Piaget goes further to emphasize a number of factors that facilitate intellectual development.

These are:

a. maturation of body organs and internal structures (maturational readiness)
b. development of lauguage-which aids communication and social interaction.
c. Healthy and stimulating environment which provide the child with objects, people and situations for experimentation and manipulation.

There are four stages of intellectual development, which include sensory motor stage (birth to 2 years), pre-operational stage between (2-7 years), concrete operational stage (7-11 years), formal operational stage (11-18 years).

The Sensory Motor Stage- (0-2 years)

A child at this stage is usually home-bound, sucking at the breast in mother arm's. The period is however, characterized by display of a limited number of uncoordinated reflect actions. These include hands and legs movement, smiling, kicking in the air etc.

a. gradual movement from total dependence on reflex action especially crying, sucking, swallowing, blinking, sneezing and yawning to ability to act on things or objects in his environment with the five (5) sense organs.
b. development of the idea of object constancy (that is, objects are perceived as remaining the same even though they may be viewed from different distances or angles) e.g. Two cars viewed from different distances) and object permanence that is, objects continue to exist even though they may be hidden from view e.g. a toy hidden under a box or blanket. This occurs about the end of the period.
c. development of idea of causality, that is, thing is caused by another. The "other child" is crying because her elder sister snatched away her toy from her. In this way, stimulus-response bond is established.
d. language begins to appear, starting with one word utterances that appear like a command and each has many alternative meanings implied

Implications for healthy environment

Children at this stage (0-2yrs) are teachable and play a lot. As they play lot, they should be provided with a lot of varied toys and simple space as play-ground (these are aspects of healthy and stimulating environment). Play activities, provided avenue for physical, socio-emotional and intellectual development. Children should be encouraged to talk with both age mates and adults in order to express themselves, be understood and corrected when they make grammatical mistakes or reinforced for correct responses.

Good and adequate feeding is necessary to provide the fuel for energy needed for play activities, and overall good health. Above all, children should be given

love and make to appreciate love, build a sense of trust which is necessary ingredients for the development of a well-adjusted personality or precisely self-concept. Self concept (the ideas one has about oneself) affects school activities in many ways.

The pre-operational stage (2-7yrs)

This period coincides with the nursery/kindergarten and early primary school age. The highlights of the stage includes:

(i) pre-operational or intuitive thinking
(ii) increased ability to use language for communication (symbolic behaviour)
(iii) gathering and classifying objects: bottle corks, seeds, pebbles etc. into colour, shape and may be functional relations.
(iv) Internal cognitive picture of the worlds begins to grow more rapidly with the aid of symbolic representation e.g. he can use the word "mummy" to represent and think about his "absentee" mother.
(v) concepts formation is aided as he classifies objects according to criteria
(vi) cannot conserve matter or reverse operations. A longer and narrower glass has more liquid in it than a shorter and wider glass even if the child saw equal amount of liquid poured into two of them
(vii) thus his perception is fixed; he sees only one side of an object or situation
(viii) his thinking is pre-logical and full of contradictions.

Implications for healthy environment

Children should be provided with concrete objects to manipulate and explore and thus form schemes (repeatable patterns of behaviour). Encourage children to use their mother tongue or immediate community language. Children should be made active in class, to participate in discussion and other activities, in order to discover new facts and ideas (discovery learning). Some at this stage like to learn in isolation, so they should be given individualized attention.

Most of the learning at this stage is rote/ verbal learning, so teachers and parents should listen to their children, correct common mistakes and reinforce correct responses without unnecessarily losing their temper or patience. Children "think" differently from adults and they have a world of their own. There is relatively little transfer from one learning situation to another.

Concrete operational stage (7-11yrs)

This is the primary school age. The characteristics of the age include:

a. Language is more refined; there is better self expression and increased understanding of others.
b. The chills can classify objects according to given criteria and is

more able reason and think about classes and sub-classes.

c. He can conserve matter (i.e. number, length, mass and volume remain constant, even if superficial changes are made in their external appearance.
d. The child begins to think in terms of sets of rules and principles involved in operations.
e. Thinking, therefore, becomes more logical, but not abstract.
f. Children begin to ask many and varied questions. They want to express themselves and therefore seek attention from the parents, teachers and fellow pupils

Implications for healthy environment

Teachers should make maximum use of audio-visual aids to help children internalize the physical operations; be patient with the children as they ask numerous questions; allow them to express themselves individuals, and emphasize understanding and relationship and contrasts between concepts.

Formal operational stage (11 and above)

This is the adolescent, secondary, or high school age. The characteristics of the age include: the ability to engage in

(a) Hypothetical reasoning (if .... then .....)
(b) Logical and abstract thinking
(c) Greater divergent and complex thinking
(d) Reversible thinking (if John is the father of Adaku, then Adaku is the daughter of John)

Implications for healthy environment

Teachers should provide challenging tasks to children in this group, give them projects (whether in groups or singly) and encourage organized debates among them for intellectual exercise. It is now possible to present a body of knowledge or subject of matter in logical sequence, emphasizing principles or rules involved, and relationships between component parts. Teachers should apply variety and variation in their instructional methods. For the greatest number of pupils to learn, materials or learning experiences should not be more difficult than necessary.

The teacher should make use of imagery, diagrams, examples and other forms of presentations involving concrete operations, when presenting learning experiences in class. Even adults and intellectuals often make use of concrete operations to make meaning out of certain problem situations. A majority of pupils or students particularly in primary 5 & 6 and junior secondary 1 & 2 never will develop formal operations. Such pupils are learning-disabled and have distorted thinking. They do not easily solve even simple problems. They have poor memory and so forget easily. Such children are potential school drop-outs

who drop into homes to become "difficult" house helps. While at school, they should be handled with care and provided with necessary remedial support.

HEALTHY ENVIRONMENT AND THE NIGERIAN CHILD

The literature is replete with the positive pay offs and multiplier effects of a healthy living environment on the growth and development of a child. This does not stop on the child, it shows on his/her family, society and the nation. According to (Fraser 1973). Jones and Brazendale (1994), Mojoyinola (1997), Oyetade (1998) and Dum (1970) a child at any age is the product of everything that has happened to him up to that time. Into every new action and relationship he/she carried the healthy or unhealthy attitudes, which have been tortured in his experience.

The mental development and indeed general development of the child is affected by the amount of early maternal stimulation received and the level of nutrition. In his own contribution, Oyetade (1998) asserted that the climate in the home i.e. general feeling, tone and mood of a child is determined by the emotional maturity and feeling of security of the parents. Thus, homes with seriously disturbed children are known to have several of the following characteristics:

1. chronic marital discord;
2. deficient warmth and responsiveness to children's needs;
3. an in balance of child attention vis-a-vis the need of the whole family;
4. inappropriate discipline
5. extensive use of punishment and
6. inconsistent and or unrealistic demands.

Parents of healthy children according to Oyelade (1998) are characterized by genuine love, affection and tenderness that is aroused by the helplessness and dependence to the child and his responsiveness to their care ministrations. The parents of a healthy child respect the child as an individual who has his own rate of growing and learning as well as his own peculiar life style.

Healthy living environment for the child therefore involves building the foundations of basic trust in the child by meeting the infants basic needs. Fraser (1973) postulates that development of the basic attitudes of trust or distrust is the first of a series of critical alternatives arising during infancy. He went on to indicate that if the child's needs are well attended to he/she becomes aware of the world or his/her environment as a good, stable, safe and encouraging place to be a place to be trusted children whose basic psychological needs have been inadequately met are usually difficult to motivate. The fact that a happy,

harmonious and supporting home plays a vital role in scholastic progress cannot be over-emphasized. In fact, intelligence is now being considered as something that grows and develops in the course of a child's active involvement and experience in his / her environment in order for a child to develop mentally and emotionally, he needs stability in the early years of his/her life. This is stability that a well organized home supported by both parents can provide and in which the mother takes an active, purposeful and personal interest in the child.

Parent care

According to Odubela (1996) the provision of adequate parental care creates a relationship where the father and mother communicate affection through their dealing with the child. Through being loved by the parents, the child learns to feel love for them and this wish is extended to others with whom he/she relates. But if these early and basic experiences of love and protection have been denied, his learning result in maladjustment, psychological and emotional disturbances and may bring about future social and educational failures.

Nutrition

Nutrition is another area where the child needs proper attention for proper growth and development. Good and adequate nutrition is an important aspect of healthy living environment. Surveys conducted by United Nation Children Education Fund (UNICEF), Word Health Organization (WHO) and Food and Agricultural Organization (FAO)of the United Nations have clearly demonstrated that the most serious and widespread health problem in the world today is protein-calorie malnutrition, a condition which is especially prevalent among children in the developing countries. According to Fraser (1974), as reported by Oyetade (1998) inadequate family resources and improper use of available resources have resulted in the inability of the Nigerian family to provide food of the right quality, and proper balance to the rapidly expanding younger generations. In one of UNICEF report, the proportion of the world's children living in malnutrition and ill-health is presently very high and continues to increase.

The physical environment

An ideal physical environment is important for life. A healthy living environment for the child implies a rich but safe environment, where children explore, manipulate and interact with their surroundings thereby developing their many sensory skills fire including and gross motor skills, eye-hand coordination, language skill habits and other routines while satisfying their natural curiosity. If a healthy living environment for the child is to be achieved in order to enhance the innate tendencies for scientific thinking and

eventual technological breakthrough for the country; it becomes very necessary that adults (Parents, Teachers) caring for the child are themselves sound and healthy. This calls for the need for comprehensives personal health services which include health maintenance, prevention of accidents and injuries diagnosis and treatment where disease exists and rehabilitation at all stages of disease to mitigate after effects.

In conclusion, a healthy living environment for the Nigerian child requires that our children be educated on the principles of good health and on good health habits, which will in no small measure enhanced the scientific thinking and technological aspirations.

PROMOTING SCIENCES AND TECHNOLOGY EDUCATION AMONG NIGERIAN CHILDREN THROUGH A HEALTHY LIVING ENVIRONMENT

Sciences are those studies that aim at establishing relationships between or among variables of naturally occurring events and phenomena. Scientist generally adopt, in their search for relationship a procedure or well-ordered and logical routine of action generally referred to as scientific method which distinguishes them from the non-scientific discipline. A child willing to be a scientist we need to imbibe certain attributes like intelligence, observant, tactful, skillful, and emotional stability to mention a few stability. According to Odubela (1996), scientific processes are those skills (mental or physical) practiced by scientist of all calling or in other worlds those activities that are typical of scientists. The sciences are better known in terms of popularly recognized discipline names such as Physics, Chemistry, Biology, Mathematics, Geology, Astronomy, Geophysics, Bio-chemistry and so forth. All which serve as the basis for technological breakthrough. According to the American Association for the advancement of science (AAAS) the list of activities performed by scientist include the following:

1. Observing
2. Counting
3. Measuring
4. Questioning
5. Communicating
6. Predicting
7. formulating hypothesis
8. making operational definitions
9. making mental models
10. controlling and manipulating variable
11. Experimenting
12. Concluding
13. manipulating instruments.

The above activities form the tools of trade of the sciences no matter their name. But closely associated with these intellectual and physical processes are a number of typical attitudes of mind

generally referred to as the scientific attitude. An attitude is a tendency to act whether positively or negatively towards something. The scientific attitude go hand in hand with the scientific process for without this link either loses its meaning and true value. A healthy living environment provides the foundation for the formation of this attitude, which mars or enhanced children interest and aspiration in becoming a scientist. Some example of the attitudes, which a healthy living environment will help in forming are as follows:

1. Belief that the rational mind is capable of finding solutions to human problems provided one gave enough.
2. Time.
3. Belief in the value of evidence or data i.e. that evidence is the basis of rational decision-making.
4. Open-mindedness regarding the out comes of empirical evidence i.e not being committed one way or the other before hand.
5. Patience, namely given enough time for events to prove themselves.
6. With-holding judgment / conclusions to the very end
7. Admitting of the possibility of other explanations than one's own of the same phenomenon.
8. Realising the tentative nature of facts, theories, explanations
9. Willingness to welcome the contributions of others in finding solutions to problems.

The above statements are the author's summarization of scientific attitudes, which are necessary and required before a person can be a good scientist or technologist. It can be seen that contrary to common belief the scientist is as much a feeling operator as he is thinking and doing operator. Time was and perhaps still is when scientists were thought to be without feelings. Indeed nowadays the issue of science and ethics and social responsibility is now freely discussed in scientific circles.

Technological education is that form of education which aims at giving the pupils such knowledge, skills and attitudes (KAS) as to enable them take up a vocation or trade upon completion of their studies. In adopting this rather simplistic model of technological education, the author is not oblivious of the fact that in the absolute everything taught in school should contribute towards one's adjustment in later life. Technological education focus on producing a specialist.

SCIENCE AND TECHNOLOGY EDUCATION IN THE NIGERIAN EDUCATIONAL SYSTEM

Having dwelt on the definitions and meanings which the concept of science and technological education, the question can be asked what provisions have been made by the Nigerians the national policy on education. For most Nigerians the National Policy on education is epitomized by its unique structural sequencing namely the 6-3-3-

4 patterns. This system aimed at producing graduate who can conveniently come to terms with environment (socially, economically, psychologically, professionally). A cursory look as to what the policy says especially as it relates to science and technical education shows that there are two major curricular lines of orientation according to Bamigbala (2001).

a) A recognition that the 20th century and the periods after are dominated by science and its applications and Nigeria cannot afford to be left behind. Nigeria must move with the others in this scientific era and culture.
b) The education system must give its products saleable skills, which they can practice upon graduation, and those skills must be relevant to contemporary Nigeria within a scientific era and culture.

The above two broad lines have been depicted more specifically in the following manner in the various sections of the policy. In the section of the philosophy of Nigerian Education, the national educational aims and objectives are given as:

a) Inculcation of National Consciousness and Unity.
b) Inculcation of the right type of values and attitudes.
c) Training of the mind in understanding the world around
d) Acquisition of appropriate skills, abilities and competence both mental and physical as equipment for the individual to live in and contribute to the development of his society.
e) Objective on the training of the mind would be achieved through a variety of school subjects including the sciences.
f) Objective on acquiring skills etc. Would be achieved through the sciences (mental skills) and through technical education (mental and physical skills)

According to Odubela (1996) among the seven objectives listed for primary education are the following:

a) Laying of a sound basis for scientific and reflective thinking
b) Giving the child opportunities for developing manipulative skills that will enable him function in the society.
c) Providing basic tools for educational advancement including preparation for trades and crafts of the locality.

The subject list that results from the above include the study science and the teaching of local crafts, domestic science and agriculture. To achieve the above objectives, an enabling environment must be provided. The healthy and enabling environment takes care of the child's needs such as:

The need for security children need love and the security of a stable family background, the security of familiar place in which to live, play and work; the security of a known routine. The

younger the child the more important is this sense of security, since his dependence is on a few adults as yet, and his intimate experience of place and routine is limited to setting namely is own home.

For the young child everything is experience from exploring his own body to meeting the increasing range of his environmental. All normal children have a strong urge to explore and find out. The need for receiving and giving attention.

Research investigation carried out at different periods by different psychologists show how vitally important it is for the child to have someone who loves and cares for him who watches and encourages each new step taken in growing up. The need to be recognized and for self-esteem. A child needs to get recognition for what he is and can do as well as to feel successful in his attempts to master skills can be very exciting but it can also bring with it frustration and failure if despite then the child is to continue wanting to try and eventually to succeed he needs recognition not only for his achievements but also for his attempts as new tasks; otherwise, he may give up his struggle, his spirit may dampen or he may seek recognition in socially unacceptable ways such as delinquency.

The need for relationship and acceptance by other children within and outside his family circle. This becomes increasingly important to the child as he grows from childhood to adolescence. Even temporary rejection by playmates can cause real distress while mere tasking social isolation leads to loneness and misery.

The need for independence and responsibilities otherwise freedom within limits. The urge to become increasingly independent, self-reliant and responsible is a marked feature of normal development.

The need for basic physical, medial facilities, social and economic requirement of the child.

The entire above are to facilitate the interest and aspirations of the child in science and technological education in order for the nation to achieve sustainable development socially, economically and technologically.

CONCLUSION AND RECOMMENDATIONS

This establishes the needs to provide an enabling environment through healthy living condition in order to ensure proper and adequate intellectual/cognitive development of the child. The home and school played a major role in intellectual development of children. The child philological needs, development needs, intellectual (mental) and emotional as well as social

and economic needs should be provided in order to make them a useful and resourceful individuals in our society.

Children should be motivated and challenged to learn but this should be within the limit of their maturational readiness and cognitive abilities. Otherwise, too much or too little motivation may result in frustration and anxiety or boredom inactivity. Therefore, the writer humbly appeals to everybody: *let us join hands in creating a healthy living environment for Nigerian children;* an environment, which will nourish, not mutilate the minds and bodies of our children. It is your duty as well as mine. With concerted effort we can do it. Now that the Federal government has embarked on environmental and good health, programme as well as free and compulsory education for 0-9years of formal education in Nigeria under the University Basic Education (UBE). Let us help them to prevent untimely death and promote good and effective living especially among children.

It is therefore recommended that their should be a cooperative curriculum planning and some measure of team teaching between the sciences and technical areas at both the primary and junior secondary school to ensure the attainment of the objectives of science education in Nigeria.

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