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Full Length Research Paper

Effects of HIV/AIDS epidemic and related sicknesses on family and community structures in Nigeria: Evidence of emergence of older care-givers and orphan hoods

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The rate of increase in HIV/AIDS is changing family structure wiping out middle generations of adults (breadwinner) leaving the aged and the young ones to take up responsibilities of support and care of their needs. The study examined this prevalence of increase in older carer and under-aged who have taking up responsibilities of meeting needs, in Benue State, Nigeria. The study revealed that about 21.82% of all children studied aged 14 years and below had lost one or both parents to HIV/AIDS and assumed the roles of parenthood. The modal class of older carers is 71 - 76 years and that of vulnerable children is 11 - 14 years old, respectively. Analysis revealed that 64.45% of the older carer group were classified poor and were living on $1 per day. Farming livelihood activity still constitutes a major income generating activities among the older carers and these categories in farming constitute the poorest (68%). Coping strategy adopted to augment shortfalls from farm income is selling off assets/properties among others. The study concluded that there is need to empower older carers on basic and simple entrepreneurial activities that can generate sustainable income and policy of streamlining the orphans into an effective care.

Key words: HIV/AIDS, impact assessment, livelihoods, older carer, orphans and vulnerable children, Benue State, Nigeria.

INTRODUCTION

An HIV/AIDS epidemic is striking at the heart of family and community support structures in Benue State. Evidence from past studies revealed that the aged and the young ones take up responsibilities of support and care of their needs (UNAIDS. 2006; Aids alliance, 2003). This HIV/AIDS epidemic is changing family structures wiping out the middle generation of adults (both men and women) leaving behind the old and young to support each other (HelpAge/AidsAlliance, 2003; Geballe et al., 1995). The consequence is that families of older carers and orphans/vulnerable children are compelled to take on new roles of care and support.

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Recent studies (Foster and Choice, 2004; Helpage Mozambique, 2003; Helpage Zimbabwe, 2002) found out that in South Africa and Uganda, 40% of children were living with their grandparents, and in Zimbabwe, over half (Drew et al, 1996). These studies concluded that older carer people make up a significant proportion of the poorest in these areas as a result of HIV/AIDS epidemics. Thus, limiting the ability of older carers to care adequately for children (as they face difficulties obtaining sufficient food, clothes and shelter), and limits their access to health care and information on livelihood security. Moreover, the financial burden of caring for children means that older carers are often forced to sell their assets or borrow money in order to cope (Helpage Sudan, 2003). The trauma resulting from the loss of family members (particularly loss of breadwinner) and the

stigma of being affected by HIV/AIDS can result in high levels of exclusion, for older people and for orphans and vulnerable children, leaving them feeling ashamed and alone (UNAIDS/WHO, 2002; Siddiqi, 2006). Many older people felt they are failing in their role as a care giver because they are unable to protect their family from social isolation (Aids Alliance, 1995; Helpage Kenya, 2002; Brown et al., 2003).

The scarcity of HIV/AIDS information on prevention, protection and how to access this information by older people limits their ability to protect themselves and their families. Past studies suggested that if older carer can have access to this information they might perform this role of care-giver and HIV/AIDS educators/counsellor on prevention and protection of these under-age (Foster et al., 1996; Elmore-Meegan et al., 1999; Helpage Kenya, 2001; Booyens and Arntz, 2003). This is research relevance and it needs investigation. To date, the role of older people as counsellors and educators has not been sufficiently recognised in community-based and national HIV/AIDS prevention programmes. Some of the literature reviewed show that if appropriate support is available – older people and orphans and vulnerable children can overcome some of the challenges posed by the HIV/AIDS epidemic (Subbarao and Coury, 2003).

Problem statement

Studies have shown that 16 million children globally under 15 years have already lost either one or both parents to HIV/AIDS and that another 40 million children will lose their parents within the next 10 years (UNAIDS, 2006; Helpage/Aids alliance, 2003). This is evidenced by the fact that millions of children are living with parents who are sick, and many more are living in households headed by older people who are struggling to provide care for a number of orphans (Hunter and John, 1998). Studies have shown that older people have always been involved, to some extent, in the care of children; the problem now is the increased extent of this care (Helpage/UNIFEM, 2001; Gabelle et al., 1995). Literature have shown that, there are a growing numbers of older people who are providing a greater amount of care to these under age ones (Mutangadura and Jackson, 1998; Helpage Africa, 2001; Helpage /Aids alliance, 2003 Barnett and Blaikie, 1992).

Recent World Bank studies found out that in 20 out of 28 countries in Africa have more than one-fifth of children that are orphaned and living with their grandparents (UNAIDS/WHO, 2002). In South Africa and Uganda, it was 40% and in Zimbabwe, over half. In Zambia, Uganda and Tanzania, grandparents made up the single largest category of carers of orphans. A study of a programme supporting older people affected by HIV/AIDS and caring for orphans (in five villages; in Tete Province, Mozambique, since September 2001) identified 774 older people caring for a total of 2,187 orphans, most of them under the age of 10. This study also indicated that older people make up a significant proportion of the poorest of the poor. Despite this added threats created by HIV/AIDS; many older people still struggle to survive, suffer poverty and social exclusion.

HIV/AIDS epidemic is placing tremendous strain on the already limited resources and capacity of older people who are caring for orphans and vulnerable children. It is widely acknowledged that the loss of the middle generation of adults severely reduces the income and consumption capacity of families affected by HIV/AIDS. This is particularly the case for older people and orphans and vulnerable children. Most of the older-headed households surveyed in Juba, Sudan, were living on less than US$1 a day – far below the income required to provide for the needs of multiple household members (Help Age International, 2002; Oppong and Agyen, 2004). The work of Steinberg et al. (2002) that conducted a study among 728 households in selected provinces (Gauteng, Mpumalanga, Free State and KwaZulu-Natal in South Africa) that had an AIDS-sick member or had recently experienced an HIV/AIDS-related death, which aimed to assess the impact of HIV/AIDS on households. These results show that almost half (44%) of these households had an income of less than 1$ per day and could therefore be classified as being poor. Approximately two-thirds of households in this study reported having increasing expenditure on medical (53%) treatment for HIV/AIDS victims.

This study also found that there is an increase in the number of under-age who has assumed the role of parenthood. As the study also revealed that about 22% of all children aged 15 and below had lost one or both parents to HIV/AIDS (Steinberg et al., 2002). The result of this study are consistent with those of Booysen's and Anntz (2003) study of the impact of HIV/AIDS on households in the Free State, which indicated depreciation in the adult equivalent per capita income of HIV-affected households that had experienced illness or death relative to those that had not. In an attempt to escape the impoverishing effects of HIV/AIDS on care-giver to the orphans by older people, they adopt the following coping strategies: alter household composition, draw on savings, sell assets or use assistance from other households and from other informal rural institutions (WHO, 2002). However, at times when people reach the point of destitution, the range of strategies they adopt may become unpredictable. A study by Ainsworth and Filmer, (2002); UNAIDS (2006) illustrated how destitution as a result of a combination of HIV/AIDS epidemics, high poverty and unemployment rates can lead people to behave in ways that they would not adopt in more favourable conditions. In line with the above arguments, high unemployment rates and poverty experienced in Nigeria could have fuelled an HIV/AIDS epidemic that is ravaging the country. It also revealed that most young adults have unprotected sexual interaction in exchange for money (National Intelligent Council, 2006). Moreover,

this report shows that about 6% of the households that had experienced illness and death classified as AIDS also have high costs in terms of expenditures and time spent on care, funerals and mourning (Knodel and Vanlandingham, 2000). This diversion of resources had implications for savings and livelihood security.

In what ways HIV/AIDS epidemic has affected family structures and increase the number of older care-giver and under-aged who have taking up responsibilities of meeting ends, in Benue State, Nigeria? What are the modal class of both the older care-giver and the under age? What type of livelihood activities these groups of people are into to take these new responsibilities? What influencing their specific usage of coping strategies? Moreover, what type of HIV/AIDS information the older care-giver need to protect themselves and their families from this HIV/AIDS epidemic? It is hypothesized that access to these relevant information to older people and orphans and vulnerable children can help them to overcome some of the challenges posed by the HIV/AIDS epidemic. Consequently, answer to these questions could provide informed policy directions. In addition, it could empower older carers on ways to protect these young ones from HIV/AIDS epidemic.

METHODOLOGY

Population

This study was conducted in Benue State, Nigeria. Benue State has the highest prevalence rate of HIV/AIDS in both rural and urban areas (National Action Committee on AIDS NACA, 2007). The prevalence rate of HIV/AIDS in the rural areas of the state is 10.52% while it is 10.04% in the urban areas (Federal Ministry of Health, 2006a). Benue state is located in the middle belt region of Nigeria. It is situated approximately between latitude 6½ - 8½^0 and Longitude to 7½ - 10^{0}E. The state shares boundaries with five other states, namely Nassarawa to the north, Taraba to the east, and Cross-River to the South, Enugu to the South-west and Kogi to the West.

Benue State has 23 local government areas. According to the population reports of 2006 about 89% of the population live in rural areas (National Provisional Commission Results, 2006). Two dominant tribes are found in the area; they are the Tivs and the Idomas. The main occupation of the people is farming and the state is referred to as a food basket of the nation. Crops commonly cultivated include yams, cassava, maize, soybeans, rice, guinea-corn, millet and beans. The state is popular for its large-scale yam production.

Sampling procedure

The Benue State Agricultural Development Project (BNARDA) has divided the state into three zones namely northern, eastern and the central zones. With a map of HIV incidence overlaid on the cropping system in the state, a vulnerability map for the state reveals the Idoma area to be more susceptible to the disease, relative to the Tiv tribe of the state. The first stage of the sampling procedure is the purposive selection of the central zone where the Idomas live. This selection was due to the reported of higher incidence of HIV/AIDS in that part of the state (Benue State Ministry of Health, 2006, Federal Ministry of Health, 2006b). A multistage sample technique was involved by selecting primary sampling units, the central zone of the State, where the Idomas live.

Then, in the second stage, individuals are selected according to some sampling strategy with a certain probability given the probability that the Primary Sampling Unit (PSU) was chosen. This PSU (the Idoma) was selected due to the higher prevalence of HIV/AIDS with the selection of households from two purposefully selected areas within that area.

The Idomas occupy nine of the twenty-three local Government Areas (LGAs) in the state. These LGAs are Otukpo, Okpokwu, Ador, Ogbadigbo, Apa, Ohimini, Agatu, Oju, and Ito. In the second stage, two LGAs were purposively selected, namely Otukpo and the Ohimini. Again these LGAs were selected due to the high rate of HIV/AIDS morbidity and mortality that have been reported (Benue State Ministry of Health). Ohimini on the other hand was picked because of its closeness to Otukpo and for logistic reasons. The final sampling state entails the selection of rural households that have been reported to have high loss of their breadwinner to an undisclosed/unknown death (although the death might not be necessary from HIV/AIDS incidence, but majority of the death came from HIV/AIDS incidence and related sickness) or had a member of the household with a protracted illness. Household selections were made possible through the help of:

(i) Key informant,
(ii) Extension workers who assisted in identifying rural households that had information on the loss of the breadwinner of such households to HIV/AIDS / related sickness and or information on some of the members that had/having protracted health problems in the past five years,
(iii) Elderly (above 65 years) farmers and relatively young farmers (ages between 9 - 17 years) who had lost their breadwinner/parents/guardian due to protracted sickness and /or had visible symptoms of HIV/AIDS and still in the hospital, and
(iv) Old rural families that were persistently spending money and/or disposing of family assets to get medical treatment for family members who are in the hospital.

Consequently, 320 rural household families were identified through these means, but only 250 had lost their 'breadwinners' or 'loved ones', or "head of households" to HIV/AIDS epidemics and related sickness or had protracted sickness for a very long period. Livelihood activities of older care-giver and under age were measured through the use of questionnaire to obtain this information of various income generating activities, the respondents are into and income accrued to it. In addition too, poverty status of the respondents was captured through the use of poverty measures of Foster-Greer-Thorbecke (FGT) by collecting specific information on incomes and expenditures data. The FGT poverty analysis used Food Energy Intake FEI method to obtain the food poverty line to categorize poverty status. This is because of its amenability to data requirements and availability. FGT poverty procedure method utilized the household income generated in meeting the needs of the household and uses it to construct the poverty line. This burrows from the work of Greer and Thorbecke (1986); Okurat et al. (2002). In addition too, data on factors influencing their specific usage of coping strategies, like the term emergency, what do they do to respond to this situation? Measure that is adopted to capture factors influencing welfare improvement or vice-versa (measure as income) is use of simple multiple regression. Where income accrue to respondent as dependent variable (DV) and independent variables (factors influencing welfare improvement) as respondent's mean age, mean educational level, no of working children/adult, household size, land/asset ownership structure, and older care-giver livelihood activities among others.

Data were collected from both primary and secondary sources. The primary data were collected by means of structured question-naires from the identified sampled households. The questionnaires

questionnaires were administered with the assistance of trained enumerators in addition with Focus Group Discussions. Primary data were collected on socio-economic characteristics like age, sex, educational status etc, of both the caregivers and vulnerable children. Data were also collected on households identified (by key informants of through selection criteria described above) as "affected by HIV/AIDS". Information was also obtain on coping strategies adopted to deal with as a result of the impacts of HIV/AIDS, including asset depletion and livelihood activities engaged in as captured in the questionnaire. Data on the health status, health needs and health-seeking behaviour of older carers and orphans and vulnerable children were also collected.

Data were also collected on the types of information the older care-giver people needs to respond to this HIV/AIDS epidemic, and the effectiveness of formal and informal education for orphans and vulnerable children to cope with this new challenges. In addition, data on the perception/believe on how effective the older care-giver can be educators/counselor and the impact of such on the understanding and behaviour of orphans and vulnerable were also gathered. On the other hand, secondary data on HIV/AIDS prevalence rate in the country and policy response of government on the issues were collected from National Action Committee on AIDS (NACA) at the state and federal levels. Data was also collected from Benue State Ministry of Agriculture, Benue State Agricultural and Rural Development Authority, Benue state Ministry of Health; all located in Markudi (the state capital) and the primary health care unit located in Otukpo. Websites of UNAIDS, Aids alliance, Helpage International and Family Health International were visited and relevance documents downloaded, reviewed, used and sighted. These sources of data were collected by institutions and helped to provide relevant data for analysis to capture the essence of this study.

Analytical procedure

Poverty Status of the Older Carer was analyzed through FGT poverty analysis using the Food Energy Intake FEI method in obtaining the food poverty line. This poverty line was then used to determine a threshold for categorization of household poverty status. The FEI poverty line is represented as

$$Z = e^{(a+bK)} \quad (1)$$

Where,

Z = Food poverty line,
K = Recommended daily allowance of calories intake (World Bank) 2,350 Kcal is the daily per capital household food energy intake recommended by the World Bank for the study of poverty (Schubert, 1994), a and b are estimated parameters to be obtained from Equation (2) as thus shown. The parameters are obtained from the relationship;

$$\ln Ei = a + bCi \quad (2)$$

Where,

Ei = total food expenditure per adult equivalent by household I (Ei=E*I Hj,
E*i = total value of food consumed by the jth household,
Hj = adult equivalent for jth household (proxy by the household size),
Ci = total calorie consumption for different household per adult equivalent by household I, a and b are parameters to be estimated. a = intercept, b = coefficient Ci is the calorie equivalents of the different types of foods consumed by the different households converted to calories.

Here, few assumptions were made

(i) The quality of difference of each food item is ignored,
(ii) The food items under consideration were assumed to be homogenous for all households, and
(iii)Local units were assumed to be fixed per community, although they may vary across communities.

Therefore, Foster, Greer and Thorbecke (FGT) index, Pα (Foster et al., 1984) was used to measure poverty status among the households. The FGT index (Pα) is given as:

$$P\alpha = \frac{I}{N}\sum_{I=1}^{q}\left(\frac{Z-Yi}{Z}\right)^{\alpha} \quad (3)$$

Where,

Z = poverty line,
Yi = Income of the household i (i = 1, 2, …., q),
q = No of household below the poverty line,
N = total number of sampled households, and
α = parameters of the FGT index (Pα). a > 0 and it can take three values of 0,1 and 2. These values give different implications.

Implications

If a = 0, the FGT index Po measures poverty incidence. This represents the index of the households that are impoverished.

(i) If a = 1, the FGT index P1 measures the poverty depth of the households. This denotes the proportion of the poverty gap that the average poor will require to get to the poverty line.
(ii) If a = 2, the FGT index P2 measures the severity of poverty. This gives more weight to the poorest of the household poverty.

The FGT index (Pα / α = 0, 1, 2) is bounded between zero and one. The closer the FGT index is to one, the greater the poverty level. The FGT index has been widely used to determine level of poverty (Greer and Thorbecke, 1986; Okurat et al., 2002; Apata, 2006). Generally, the higher the Po, the worse the poverty situation can be. Similarly, the higher the P_1 value the greater is the depth of poverty. In the same vein, the higher the P_2, the more severe poverty situations will be. FGT measures were used to categorize poverty status of the respondents.

Stepwise multiple linear regression analysis procedure

Multiple regressions analysis was used to explain factors that could influence changes on the welfare (measure as income) of the household members as a result of the loss of their breadwinner to HIV/AIDS and related sicknesses. Thus, the Regression was stated as (data used were normal):

$$Yi = \beta o + \beta 1\, X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \ldots X_{13} + ei \quad i = 1,2,3,4,\ldots,13 \quad \ldots\ldots\ldots(4)$$

Where,

Yi = Welfare of the household's member {Income in Naira (₦)},
βo = Constant term,
β_{1-13} = Regression co-efficient of the independent variables,
$X_1 - X_{13}$ = Independent variables,
ei = error term,
X_1 = household's member mean age (years), X_2 = mean

Table 1. Age distribution of respondents.

Older care-giver (N = 165)			Vulnerable children (N = 55)		
Age bracket (Years)	**N**	**P**	**Age bracket (Years)**	**N**	**P**
60 - 65	11	6.67	6 - 10	8	14.55
66 - 70	35	21.21	11 - 14	24	43.63
71 - 75	82	49.70	14 - 18	23	41.82
76 - 80	29	17.58			
81 - 85	8	4.84			
Total	165	100.00	Total	55	100.00
Mean age	75.56		Mean age	14.11	

Source: Field Survey, 2007, N = Frequency, P = Percentages.

educational level of household's member (years), X_3 = no of working children / adult (no.), X_4 = household size (no.), X_5 = land/asset ownership structure Naira (₦) , X_6 = older carer livelihood activities (no.), X_7 = older carer contribution to household income (₦), X_8 = schooling status of the children/vulnerable children (years), X_9 = coping strategies adopted by the older carer (no.), X_{10} = access to Extension services / information by the households, X_{11} = remittances from relations and friends (₦) X_{12} = expenses on medical bills (₦), X_{13}= expenses on food items (₦). The independent variables were subjected to process to determine level of multi-co linearity, variables that show sign of multi-co linearity were thrown out of the equation.

RESULTS

Socio-economic characteristics of the respondents

It is very important to have the understanding of the respondents' background characteristics, so as to identify group dynamics of the study (Table 1). The socio-economic characteristics considered in this study include, (1) age of older people who are care-giver of orphans (2) age of orphans/vulnerable children, (3) educational status older care-givers, (4) educational status of orphans/vulnerable children, (5) income generating activities of older care-givers, (6) income generating activities of orphans/vulnerable children, (7) household size and gender. Other include; medium of access to information on HIV/AIDS preventive measures by the respondents. The mean age of the older people as carers is 75.56 years and vulnerable children as 11.14 years old. The educational status of the respondents were not too low for the entire category in the older care-giver (above 80%), but educational level vary greatly. Less than 20% (18.79%) of the older carer had no education at all, while only 1.21% had the highest level of education.

Poverty status as determined by FGT measures

Farming (23.03%) is still the significant source of livelihood activities (Table 3). The result shows that 38.17% of the children were involved in this occupation. In computing the poverty status of the older carer respondents, ₦ 3549.25 (about $29.95, this reflected less than $1 per day). Results presented on Table 4 revealed that the Idoma tribe has the highest head count of poor households (66.7%) and follow by Tiv (62.2%) tribe.

Coping strategies to deal with loss of loved ones and expenses on giving care

Focus Group Discussions, 45% of all affected house-holds reported that they hired others to help with work in the fields; 62% received support in the form of field labour from their families; 29% reported that they had reduced the area under cultivation; and only 4% reported changes in crop mix (from yam to cassava) to reduce their labour requirements. The most frequently reported coping strategies in Benue State were selling of assets/properties (Table 6). Remittances and receiving contributions from relations and friends is among the significant coping strategies adopted by the affected households. Neighbourhoods and street begging (45.63%), picking and selling firewood (25.16%), taking loans (20.13%) and casual labour (15.08%). Analysis of the extra expenses incurred in giving care by the affected households was presented from Table 7. This table indicates the burden of giving care to HIV/AIDS and other related households by the affected households. Reports from the study indicated 87.31% lost their contributions to giving care to the sick. In addition, 32.17% of households with a chronically ill person and 50% of households that experienced the death of a young adult went into debt. Payment of medical bills, support from relations and friends and cost of customary rites affected households by 29.61, 18.72 and 11.51%, respectively.

Analysis on the Information needs on HIV/AIDS by respondents

Table 8 shows that extension services (30.91%). The analysis of the older carer on sex distribution revealed

that 58.79% of the respondents are males (Table 9); while household size distribution analysis shows 7 - 9 household sizes as the highest (Table 10). In addition to this, this category has the highest number of orphans/vulnerable children (17). The orphan hood status revealed that orphans living with their close grandparents constituted the majority (38.18%), Table 10. While the categories of orphans that has no definite shelter are 21.82%. This analysis further shown that 68% of the orphans/vulnerable children that are been catered for by male headed-household, fall within the category of 1 - 6 household members, while 81% in the category of above 6 household members are been catered for by female headed-household (Table 11).

Results of the multiple regression analysis

The R^2 value was used to explain the variation between the independent and dependent variables. The R^2 value of 0.715 indicated that the independent variables explained 71.5% of the variance associated with dependent variable. In addition, the F-value was used to determine the goodness of fit of the model. The value is statistically significant at one percent level. Seven variables are statistically significant at various levels. These are mean educational level of household's member (X_2), number of working children/adult (X_3), household size (X_4), older carer contribution to household income (X_7), coping strategies adopted by the older carer (X_9), access to Extension services / information by the households (X_{10}) and expenses on medical bills (X_{12}). Four of the variables are statistically significant at 1%; the positive values are mean no of working children / adult (X_3) and coping strategies adopted by the older carer (X_9). While, the negative are household size (X_4) and expenses on medical bills (X_{12}). Two variables are however, significant at 5%; these are mean educational level of household's member (X_2) with positive sign and older carer contribution to household income (X_7) with negative sign. Access to Extension services/information by the households (X_{10}) is the only variable that is statistically significant at 10% (Table 12).

DISCUSSION

Socio-economic characteristics of the respondents

The mean age of the older people as carers is 75.56 years and vulnerable children as 11.14 years old. This show that older carers have passed beyond their prime and productive years and cannot meaningfully engaged in any income generating activities that could bring money that could cater adequately for the well being of the household's members. The vulnerable children mean age on the other hand reflects a very young class that still need to be under the tutelage of their parents or guardians (Table 1). In addition, the modal class of age of older carer is (age-bracket) 71 - 76 years and that of vulnerable children is 11 - 14 years, respectively.

The educational status of the respondents were not too low for the entire category in the older care-giver (above 80%), but educational level vary greatly. Less than 20% (18.79%) of the older carer had no education at all, while only 1.21% had the highest level of education. However, the modal class is primary school attained by the older carer. This entails that dissemination of new ideas and methods can be assimilated and taken advantage of (Table 2). For the vulnerable children, the analysis reveals that 61.82% of the children are still in primary school. Literature (Siddiqi, 2006; UNICEF, 2006) have revealed that, it is at this stage that child labour become rampant, where the children are being taking advantage of.

Poverty status as determined by FGT measures

The three measures of poverty, namely the level, depth and the severity of poverty were computed for the older carer. In order to have a profound finding, the income profiles of the respondents were assessed. This shows that farming (23.03%) is still the significant source of livelihood activities (Table 3). This finding thus, confirms the works of Idachaba (2000); Eglama and Bamidele (1999); Canagarah et al. (1995) that farming has been left for the aged. Income generating activities of the vulnerable children analysis reveals that causal labour constitutes livelihood medium most accessible to the children. The result shows that 38.17% of the children were involved in this occupation. In computing the poverty status of the older carer respondents, ₦3549.25 (about $29.95, this reflected less than $1 per day) was computed monthly to be the threshold. Consequently, any respondents below this figure categorized as poor. Results shown on Table 4 revealed that the Idoma tribe has the highest head count of poor households (66.7%) and follow by Tiv (62.2%) tribe.

The cross tabulation analysis of poverty profile and income generating activities of the respondents show that, those category of older carer in farming constituted the poorest (68%), while pension able income with the least (32%) (Table 5). This thus, suggests that farming as a source of income do not generate sufficient income to meet the food basic needs of the households. However, coping strategies adopted by affected households to augment shortfalls from farm income were thus, shown in Table 6.

Coping strategies to deal with loss of loved ones and expenses on giving care

The implications of illness and death are not limited to the ill person and the household where he or she lives. Many

Table 2. Educational status of respondents.

Educational level (Older care-giver N = 165)	N	P	Educational level (Vulnerable children N = 55)	N	P
No functional school	31	18.79	No functional school	13	23.64
Primary school	92	55.76	Primary school	34	61.82
Secondary school	37	22.42	Secondary school (Class 1)	8	14.54
Post-secondary school	3	1.82	Post-secondary school	-	-
University	2	1.21	University	-	-
Total	165		Total	55	

Source: Field Survey, 2007. N = frequency, P = percentage.

Table 3. Income generating activities of respondents.

Income generating activities (older caregiver N = 165)	N	P	Income generating activities (vulnerable children N = 55)	N	P
Farming	38	23.03	Farming	16	29.10
Trading of manufactured goods	29	17.58	Trading of manufactured goods (hawking sachet water)	18	32.73
Remittances (friends and relations)	34	20.61	Remittances (friends and relations)	-	-
Pensions	27	16.36	Pensions	-	-
Casual Labour	37	22.42	Casual Labour	21	38.17
Total	165		Total	55	

Source: Field Survey (2007). N = frequency, P = percentages.

Table 4. Poverty profile of respondents.

Town / Tribe	P0	P1	P2
Idoma	0.667	0.374	0.132
Igede	0.532	0.173	0.097
Tiv	0.622	0.309	0.187

Source: Poverty profile analysis results

Table 5. Poverty profile and income generating activities of the respondents.

	Poverty incidences		
Livelihood activities	**P0**	**P1**	**P2**
Farming	0.68	0.41	0.12
Trading of manufactured goods	0.43	0.18	0.08
Remittances	0.52	0.16	0.09
Pensions	0.32	0.11	0.05
Casual labour	0.64	0.38	0.13

Source: Descriptive (cross tabulation) analysis.

more are directly affected because the burden of care is shared among households: the ill person might be moved from one household to another to be cared for, or households might make a contribution in cash, kind or labour, or by taking responsibility for the bereaved. Illness and death have always been part of daily life and households have developed strategies for dealing with this. Households cope with losses of labour in various ways. In this study, as found out from the Focus Group Discussions, 45% of all affected households reported that they hired others to help with work in the fields; 62% received support in the form of field labour from their families; 29% reported that they had reduced the area under cultivation; and only 4% reported changes in crop mix (from yam to cassava) to reduce their labour requirements. Still, the term 'coping' can be misleading as it suggests that a household can actually manage, but this may not be the case when the long-term costs are actually undermining their livelihoods.

Table 6 and 7 therefore give an overview of the coping strategies adopted by the affected households by the brunt of HIV/AIDS or other chronic diseases as well as the extra expenses incurred for costs related to medical expenses and funerals. Table 6 indicates however, several coping strategies that were adopted to manage this situation. The table indicates the percentage of households using a particular strategy, but does not provide information on the size of the actual contribution. The most frequently reported coping strategies in Benue State were selling of assets/properties (Table 6). Remittances and receiving contributions from relations and friends is among the significant coping strategies adopted

Table 6. Coping strategies adopted by rural households.

Coping Strategies	Affected households (%)
Sold assets/properties	71.02
Remittances from family members and friends	63.02
Neighbourhoods and Street begging	45.63
Picking and selling fire woods	25.16
Took loans	20.13
Casual labour	15.08

Table 7. Analysis of the extra expenses incurred in giving care by the affected households.

Extra expenses on giving care	Affected households (%)
Giving care to the sick	87.31
Mourning and funeral costs	50.02
Chronically ill person	32.17
Payment of medical bills	29.61
Support from relations and friends	18.72
Cost of customary rites	11.51

Table 8. Medium of Access to Information needs on HIV/AIDS by Respondents

Access to Information on HIV/AIDS (Older care giver; N = 165)	N	P	Access to Information on HIV/AIDS (Vulnerable children N = 55)	N	P
No access	34	20.61	No access	48	87.27
Radio / Television	38	23.03	Radio / Television	-	-
Extension services	51	30.91	Extension services	7	12.73
Informal (friends and relation)	42	25.45	Informal (friends and relation)		
Total	165		Total	55	

Source: Field Survey, 2007, N = Frequency, P = Percentages.

Table 9. Sex distribution of the respondents.

Gender analysis (Older caregiver; N = 165)	N	P	Gender analysis (Vulnerable children; N = 55)	N	P
Male	97	58.79	Male	24	43.64
Female	68	41.21	Female	31	56.36
Total	165		Total	55	

Source: Field Survey (2007). N = frequency, P = percentage.

adopted by the affected households. Neighbourhoods and Street begging (45.63%), picking and selling firewood (25.16%), taking loans (20.13%) and casual labour (15.08%). Often loans were obtained from informal credit organizations or through relatives and friends, which eventually could become gifts as this older would not be able to pay back.

Analysis of the extra expenses incurred in giving care by the affected households was shown in Table 7. This table indicates the burden of giving care to HIV/AIDS and other related households by the affected households. Reports from the study indicated that due to adult morbidity and mortality, 66% lost income and 87.31% lost their contributions to giving care to the sick. In addition, 32.17% of households with a chronically ill person and 50% of households that experienced the death of a young adult went into debt. Payment of medical bills, support from relations and friends and cost of customary

Table 10. Household size distribution, number of orphans catered for by older carer and orphanhood status.

Household size	Frequency	No. of orphan cared for (mean)	Orphanhood status N = 55	Frequency (%)
1-3	21	2	Living with grand parent (close relation)	21 (38.18)
4-6	58	4	Living with grand parent (distant relation)	16 (29.09)
7-9	65	17	Living with friend parents	6 (10.91)
10-12	3	7	No defined shelter	12 (21.82)
13-15	13	11		
Above 15	5	14		
Total	165	55		55 (100.0)

Source: Field survey.

Table 11. Cross tabulation analysis of gender and household member.

Household member	Male	Female	Total
1-3	13	8	21
4-6	53	5	58
7-9	25	40	65
10-12	1	2	3
13-15	3	10	13
Above 15	2	3	5
Total	97	68	165

Source: Cross tabulation table.

rites affected households by 29.61, 18.72 and 11.51%, respectively.

Analysis on the information needs on HIV/AIDS by respondents

This section analyzed information flow and accessibility to respondents for policy directions. Access to information on HIV/AIDS by respondents as shown in Table 8 explain that extension services (30.91%) as the most identified source of information in the older carer category, follow by informal medium. Although, these older carer cannot be sent to school again, rather aggressive awareness campaigns and mass-mobilization through extension information agencies of the government need to be improve upon. In addition, shows and competition could be organized to sensitize the older carer on the relevance of good access to information on HIV/AIDS. Moreover, access to relevance information on HIV/AIDS could make them effective educators/ counsellors on how to protect the orphans and the vulnerable children (HIV/AIDS victim) from social isolation and exclusion.

The analysis of the older carer on sex distribution revealed that 58.79% of the respondents are males (Table 9); while household size distribution analysis shows 7 - 9 household sizes as the highest (Table 10). In addition to this, this category has the highest number of orphans/vulnerable children (17). The orphan hood status revealed that orphans living with their close grandparents constituted the majority (38.18%) (Table 10). While, the categories of orphans that has no definite shelter are 21.82%. These are the orphans that nobody is taking care of and already taking the roles of parenthood. Cross tabulation analysis of gender and household member table show that modal class of male headed household of orphans/vulnerable falls in the category of 4 - 6 household members, while 7 - 9 household members fall within the modal female headed household (Table 11).

This analysis further shown that 68% of the orphans/vulnerable children that are been catered for by male headed-household, fall within the category of 1 - 6 household members, while 81% in the category of above 6 household members are been catered for by female headed-household (Table 11). This analysis proved that female headed-household members tend to provide support and care for the orphans/vulnerable than their male counterpart.

Results of the multiple regression analysis

Simple multiple linear regression analysis was used to examine factors that could influenced efforts of the household members' in improving their welfare (income increase) due to the loss of their breadwinner to HIV/AIDS. The result also shows that seven variables are statistically significant at various levels. These are mean educational level of household's member (X_2), number of working children / adult (X_3), household size (X_4), older carer contribution to household income (X_7), coping strategies adopted by the older carer (X_9), access to Extension services / information by the households (X_{10}) and expenses on medical bills (X_{12}). Four of the variables

Table 12. Result of the multiple linear regression model.

Independent variable	Regression coefficient	Standard error	T-value
Household's member mean age (X_1)	0.00383	0.01186	0.3229
Mean educational level of household's member (X_2)	0.01212	0.00576	2.1038**
No of working children / adult (X_3)	0.00470	0.00110	4.2779*
Household size (X_4)	-0.05737	0.01855	-3.0929*
Land/asset ownership structure (X_5)	0.01894	0.01347	1.4067
Older carer livelihood activities (X_6)	0.01119	0.06019	0.1560
Older carer contribution to household income (X_7)	-0.04048	0.01692	-2.3919**
Schooling status of the children/vulnerable children (X_8)	-0.09005	0.05977	-1.5058
Coping strategies adopted (X_9)	0.19326	0.02512	7.6943*
Access to extension services / information by the households (X_{10})	0.00316	0.00167	1.8895***
Remittances, relations and friends (X_{11})	0.01894	0.01347	1.4067
Expenses on medical bills (X_{12})	-1.03034	0.38024	-2.7097*
Expenses on food items (X_{13})	-0.6203	0.08468	0.7325

Source: Computer results. R^2= 0.715, Adjusted R^2= 0.673, F = 24.57, ***Significant at 10, **5 and *1%.

are statistically significant at 1%; the positive values are mean no of working children / adult (X_3) and coping strategies adopted by the older carer (X_9). While, the negative are household size (X_4) and expenses on medical bills (X_{12}). Two variables are however, significant at 5%; these are mean educational level of household's member (X_2) with positive sign and older carer contribution to household income (X_7) with negative sign. Access to Extension services / information by the households (X_{10}) is the only variable that is statistically significant at 10% (Table 12).

Consequently, it can be deduced that the higher the educational level of household's members, no. of working children/adult, relevance coping strategies adopted and access to information on prevention of being infected with HIV/AIDS, the better their income. Conversely, the higher the household size, the lesser older care-giver contribution to household income and the greater expenses to medical bills the worse off they become in terms of having sufficient money to meet other basic needs.

Conclusion

The evidence contained in this study support past studies that revealed that HIV/AIDS epidemics is wiping family structures as older care-giver still have to engage in income generating activities to provide for loved ones. Poverty analysis revealed that 64.45% of the older care-giver households were classified poor and were living on $1 per day. Farming livelihood activity still constitutes a significant income generating activities. The study further show that those categories of older carers in farming constituted the poorest (68%). Therefore, any efforts to reduce HIV infection rates successfully should take poverty into consideration, just as poverty reduction programmes aiming at success should take HIV/AIDS into consideration. There is also the need to and how crucial is to have access to effective information by these older carers on basic and simple entrepreneurial activities. Also, have access to effective information on sustainable methods of changing unsafe sexual behaviours. Thus, making the older carers as an effective educators/counsellor on HIV/AIDS prevention and curbing the spread.

The study further indicated that, the older carer group lost 87.31% of their contributions or income to giving care to the sick thus increasing poverty status, reducing their capacity to live a comfortable life, invest and spend on future projects. Thus, there is the need for policy makers, governments and all stakeholders to address this issue by taking over full responsibilities of the care of the sick person (s) identified as a result of HIV/AIDS or related sicknesses infections. The study revealed that, about 21.82% of all children studied aged 14 and below had lost one or both parents to HIV/AIDS and already taking the roles of fatherhood. Therefore, policy of mandatory education from primary school to junior secondary school should be extended to these children. In addition, these categories of children could be assisted by giving them scholarship to attend higher institutions.

For the factors influencing HIV/AIDS and its related sicknesses efforts should be intensified on how to reduce these factors. Moreover, key challenge is to find effective and sustainable methods of changing unsafe sexual behaviours. This requires an intense exploration of the economic, social, cultural and political factors that influence such behaviours. Direction can be sought from existing studies as well as from public opinions regarding what could be done. Finally, the study revealed that, incidence of HIV/AIDS is a significant factor impoverishing

households in Benue State. It is therefore crucial that the spread of the epidemic is halted, affected people receive care and support, and opportunities for mitigating the impact seized.

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