

**EXPENDITURE PATTERNS ON FOOD AND NON-FOOD ITEMS IN
HIV/AIDS AFFECTED AND NON-AFFECTED HOUSEHOLDS IN KISUMU
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ABSTRACT

The HIV/AIDS pandemic is a global crisis with consequences that will be felt for decades to come. Though there are many chronic diseases in Kenya, HIV/AIDS is presently having a devastating effect by threatening the food production systems, intensifying poverty prevalence, increasing nutritional implications, creating more orphans than existing social networks can cope with and basically affecting all indicators of socioeconomic development in the country. Decreased productivity, along with an increase in medical expenditures often results in a worsening livelihood security situation for people living with HIV/AIDS and other members of their households. The ability of households and communities to ensure their food and nutrition security in the face of AIDS is being severely challenged. Livelihoods are being eroded through the effects of premature illness and death on household labor power and through the fracturing of intergenerational knowledge transfer. Social relations and capacity to care are being put under immense strain by HIV-related stigma and exclusion, increasing orphaning rates, and reduced incentives for collective action. Financial stress is increased as expenditures for health care and funerals increase, and as credit becomes harder to access. A cross-sectional study was conducted to assess the expenditure patterns on food and non-food items of the affected and non-affected households. Purposive sampling technique was used to select 160 respondents. An interview schedule was used to collect the information. Measures of central tendency as descriptive statistics and chi-square statistic as an inferential statistic were used to analyse quantitative data. Data revealed that there is a significant relationship between HIV/AIDS status and expenditure patterns on food and non-food items. Most affected households had most productive persons affected by HIV/AIDS. Thus, people living with HIV/AIDS, their families and communities are overcome by the effects of the pandemic. It is recommended that the Ministries of Health Planning and Development and Agriculture can save families from the effects of HIV/AIDS by instituting food security interventions based on sound, sustainable agricultural practices. The study will benefit the community, hospital, government and non-governmental organizations (NGOs) through the findings which will help improve the existing policies and programmes.

Key words: Expenditure patterns, HIV, income, medication

INTRODUCTION

The AIDS epidemic is having an enormous effect on households, as seen with increased medical and health expenditures, funeral expenses and decreased income. Reducing food consumption quantity and quality may be a highly erosive “coping” strategy, as nutrient requirements rise following HIV infection. The result is a loss of savings, assets and property in the affected households. Household expenditure constitutes 51 percent of the total health financing, and HIV/AIDS imposes significant additional costs [1]. This problem is magnified when the infected person is the breadwinner. Absenteeism from work due to poor health as the disease progresses affects household income. Consequently, affected households are poorer than they would be without HIV/AIDS. About 56 percent of the population in Kenya lives below the poverty line, subsisting on less than one dollar per person per day [2]. The disease pushes affected households deeper into poverty. The vicious cycle of HIV/AIDS and poverty reduces resources that would otherwise be invested in health and education of children, depleting the country of human capital in both the present and next generations.

The HIV prevalence rate is still rising, threatening human welfare, development progress, social stability and food and nutrient security of populations. The global HIV/AIDS epidemic has adverse effects on social and economic development. The estimated number of persons living with HIV worldwide in 2007 was 33.2 million (30.6 – 36.1 million), a reduction of 16% compared with the estimate published in 2006 which was 39.5 million (34.7 – 47.1 million) [3]. Sub-Saharan Africa remains the most seriously affected region, with AIDS as the leading cause of death. Estimates show that 1.2 to 1.5 million people in Kenya between the ages of 15 to 49 years are infected by HIV [4]. According to the Kenya Health and Demographic Survey of 2003, the average prevalence of HIV infection in Kenya is 7%. More than twenty-five years into the epidemic, HIV and AIDS issues are viewed as more than simply medical, with ramifications well beyond the traditional medical model of disease [5]. The HIV/AIDS epidemic has increasingly been recognized as a cross cutting multi-sectoral issue that should be taken into account at every level of development policy planning. It impacts upon all types of assets such as human, financial, social, physical, natural, capital as well as information related to political assets.

Increased household expenditure on medical care, decreased ability to work and higher demands on time for care of PLWHA may arise due to HIV/AIDS. Children are forced to discontinue schooling due to the economic stress of AIDS, coupled with additional funeral expenses. Socio-cultural practices may aggravate the situation when the surviving spouse is unable to access the property of the deceased. The remaining spouse, who may be sick, encounters problems, which accelerates the downward spiral, thus increasing poverty in the household. Where the traditional solidarity systems are worn out, the family may progressively slide into destitution, leaving families of the elderly and children; where active adults die, essential skills are lost within the family and the community.

Study setting

The study was conducted in East Kolwa location, Winam Division of Kisumu District. The district lies in a depression that is part of a large lowland on the Nyanza Gulf, along Lake Victoria. The study area chosen was East Kolwa location, Winam Division of Kisumu District, Nyanza province, Kenya. The district covers a total area of 1177.5 Sq Km, of which 918.5 Sq Km is arable land and 259 Sq Km is occupied by water mass. The target households were derived from East Kolwa location, which comprises three sub-locations, namely: Chiga, Mayenya and Buoye. Buoye sub-location was purposively selected as the study area due to the HIV burden in the area. According to the baseline survey done by Orongo Widows and Orphans group with the assistance of AMREF in 2003, the population of Buoye sub-location was 5068 and number of households was 1667 [6].

METHODS

Data collection

The study was a cross-sectional community based survey of households in East Kolwa location, Kisumu District, Nyanza Province. A sample size of 160 households was purposively selected for the study. The unit of analysis used in the study was the household. The study targeted affected households who were defined as households where at least one family member had been lost to HIV/AIDS related illness, households in which one family member had suffered from chronic illness or from HIV/AIDS and households that had suffered the impact of both illness and death over the last five years. The respondents were the caregivers from the index households (both affected and non-affected). Data were collected with the help of a consolidated interview schedule questionnaire, which was administered to one member of each of the 160 households who plays a major role in food provision. Interview schedule was used to collect information from the caregiver of the index household, who was the respondent. The interview schedule was used to collect data on the level of expenditure patterns on food, medication, fuel, clothing, housing, education and income. Interviews were arranged with each respondent of the household at a time convenient for them and it was carried out in the respondent's home, thus enabling the interviewer to observe and record information on different characteristics of the household. The researcher read the questions in the interview schedule to the interviewee and then recorded the responses. For ethical reasons, the information was treated as confidential.

Data Analysis

Statistical Package for Social Sciences (SPSS) version 10.1 was used to analyze the data at 95% level of confidence. Measures of central tendency as descriptive statistics and chi-square statistic as an inferential statistic were used to analyse quantitative data. Chi-square was used to establish whether there is any association between HIV/AIDS status and expenditure patterns on food and association between HIV/AIDS status and expenditure patterns on medication among households.

Ethical consideration

The researcher obtained permission to carry out the study from Maseno University and the Ministry of Higher Education, Science and Technology. The researcher then sought permission from the local chief and sub-chief who were briefed on the objectives, procedures and the requirements of the research. The researcher sought informed consent from the respondents and they were briefed on the research procedures and assured of confidentiality.

RESULTS

Prevalence of HIV/AIDS in the affected households is detailed in table 2. About 26% of the affected households had persons living with HIV/AIDS while 74% of them had lost at least a family member to HIV infected individuals had died. The caregivers involved in the study were wives, husbands, daughters, sons and other relatives. In households where the caregivers were husbands, 5.5% of the wives were affected by HIV/AIDS, where caregivers were wives, 32.5% of the husbands were affected. Where the caregivers were mother or father, 35.1% of the sons were affected and where the caregiver was mother or father 20.8% of those affected were other relatives (daughter in law or son in law) were affected. Majority of those affected were men as husbands and sons of the caregivers.

Details of the socio-demographic characteristics are shown in table 1. A total of 83 (52%) households were non-affected while 77 (48%) were affected with HIV/AIDS. The majority of the individuals from the affected were aged 50 years old and above compared to those from the non-affected households with a majority falling in the age category of 30-49 years old. In the 18-29 years category the non-affected households were more than the affected households. In the non-affected households 33.5% were widowed compared to over half of the affected (55.8%). The level of education in the affected households and the non-affected households were fairly similar with 24.7% having no formal education, 57.1% primary education, 14.3% secondary education, 2.6% tertiary college education (middle level) and 13.7% university education.

The socio-economic characteristics of the index households involved occupation, income levels, land size and agricultural activities. They also included non-agricultural activities such as small business for example fishing, basketry, and charcoal burning. In the non-affected households, 72.3% of the respondents earned a monthly income of less than Kshs 1000. In the affected households, 90.9% earned a monthly income of less than Kshs 1000 (\$13 – exchange rate at kshs 76.00), 7.8% between Kshs 1001-2000, 1.3% between Kshs 2001-3000. In the non-affected households, 80.5% had land while in the affected households 61.0% had land. Whereas 19.5% in the non-affected households had no land, 39.0% in the affected households had no land. In the non-affected households, 64.9% kept livestock compared to 61.0% in the affected households. More than 70% of the households in both groups owned less than 2 (two) acres of land. Only a few households (20%) owned above 3 (three) acres of land.

Expenditure Patterns on Food and Non-Food Items

Table 3 shows the monthly expenditure on food, education, medication, clothing and fuel. The mean expenditure of the non-affected households' monthly income on households' basic requirements was between Kshs 2000-4000. The mean expenditure in the affected households was less than kshs 3000. The result revealed a significant association, ($\chi^2_{\text{obt}} = 14.3$, $N = 154$, $df = 2$, $p < 0.05$) of those whose HIV/AIDS status is positive tend to spend less on food than those who are negative. A significant relationship was found between HIV/AIDS status and expenditure on medication ($\chi^2_{\text{obt}} = 9.1$, $N = 154$, $df = 1$, $p < 0.05$). This implies that HIV/AIDS status is contingent upon expenditure on medication. However, since the $df = 1$ there was a possibility of committing type I error, that is, falsely rejecting the null hypothesis that there was no relationship between HIV/AIDS status and expenditure on medication. Hence, Yates [7] correction for distance was applied, and the relationship between the cost of medication and HIV/AIDS status was significant ($\chi^2_{\text{obt}} = 7.0$, $df = 1$, $N = 154$, $p < 0.05$). Those who are positive tend to spend more on medication compared to those who are negative.

Reasons for Change in Expenditure Patterns

Change was defined in terms of expenditure in the study. The reasons for change in the expenditure patterns included illness, death, loss of employment and lack of money (Table 4). In the non-affected households, 77.9% had changes in their expenditure patterns while in the affected households, 96.1% made changes in their expenditure patterns. In the non-affected households, 51.9% experienced some illness in the last two weeks while in the affected households, 80.5% of the households had experienced some illness in the last two weeks. The illnesses included pneumonia, tuberculosis, diarrhoea, malaria, and chest related ailments. Data further showed that 18.2% of the households sold their assets and 81.8% did not sell their assets. In the affected households, 72.7% sold household assets and 27.3% did not sell any household asset. The reasons for selling the assets included medication, funerals, school fees, and food purchase (Table 4).

DISCUSSION

The difference in the age sets of the population from the affected and non-affected indicates increased mortality in the affected households. The income earned monthly in the non-affected households was between Kshs 0 - 4000, while in the affected households it was between Kshs 0 - 3000. This reflects low income in both the affected and non-affected households even though the monthly income in the non-affected households is relatively higher. Income affects the household's purchasing power and access to food. Thus, households with less income may not be able to purchase food that will satisfy the needs of all household members, indicating part of the pieces of land could have been sold to take care of expenses. The respondents in both groups lived in their own homes and, therefore, did not spend any monthly income on shelter.

The affected households spent more on medication compared to the non-affected households and it can be envisaged that it could be due to the health status (HIV/AIDS), which costs more to manage especially the opportunistic infections. The expenditure on fuel and clothing remained the same (> 2000) for both groups. The reduced expenditure on medication in the non-affected households possibly indicates less prevalence of (especially the opportunistic infections associated with HIV/AIDS) diseases as compared to the affected households. The monthly expenditure on food in the affected households was lower than the non-affected households. This can be attributed to the higher expenditure on other items like medication. Food security depends on an adequate income and assets including land and other productive resources as well as food purchase.

The number of survivors of HIV/AIDS morbidity (26%) was lower than the number of HIV/AIDS mortality (74%) in the affected households. This may be attributed to the high medication costs and food intake/availability, which the households cannot cope with, thus resulting in the individuals succumbing to the HIV related diseases. About 47% of the Kenyan population does not have secure access to food resources to adequately meet their needs. The high food insecurity is related to poverty and a reduction in agricultural production. HIV/AIDS reduces a household's ability to produce and buy food. Adults with HIV are less able to work on their land or earn income from other activities. Increased health costs require household money that is needed for food. Decreased productivity, along with an increase in medical expenditures, often results in a worsening livelihood security situation for the PLWHA and other members of their household. Research has shown a livelihood security difference between households that reported having a household member living with HIV and AIDS and non-affected households [8]. A study in Indonesia showed that the prime-age male death was associated with a 27 percent reduction in mean per caput household consumption, whereas the death of a female had no significant impact [9]. In Mexico, they found the death of a prime-age adult household member to reduce per caput consumption by nearly 8 percent, with no significant gender differences. In Côte d'Ivoire, WHO and UNAIDS surveyed 107 households with at least one adult ill with AIDS and with one or more children and interviewed them six times at two-month intervals [3]. These data were compared with the results of a study conducted in Yopougon in May 1992 and based on a sample of 2,064 households. The study found per caput consumption of AIDS-afflicted households to be half that of other households. Death arising from conditions related to HIV/AIDS significantly increased the probability of a household falling below the poverty line.

Food expenditure was significantly ($p < 0.05$) higher among the non-affected households. A higher proportion of the affected household income was spent on medication though food purchase was given priority over the other households needs such as clothing and fuel. The high expenditure patterns on medication in the affected households could be attributed to the HIV/AIDS disease. This agrees with a study

done in Uganda, which showed that 65% of the households affected by AIDS were obliged to sell property to pay for health care [1]. In South Africa, average monthly per caput food expenditure of afflicted households was 70 to 80 percent that of other households [10], but no significant difference was found in total monthly expenditures, most likely because of rises in health-related expenditures. AIDS afflicted households do tend to incur high health-care expenditures [3]. In Côte d'Ivoire WHO AND UNAIDS, found that health-care costs specific to the person with AIDS accounted for almost 80 percent of the household health-care budget [11].

The expenditure pattern in the affected households agrees with a study done in Tanzania, which stated that funeral expenses represented about 60% of direct costs associated with an AIDS victim [12]. The households affected are more food insecure due to their increased expenditure on medication and funerals. The pattern of results is in agreement with data from Tanzania, which showed that among the poorest 50% of affected households' expenditure on food was reduced by 32% and food consumption by 25% [13].

With the progression of HIV and AIDS, assets and cash resources become increasingly constrained as incomes decline and associated medical costs rise [14-16] (Table 3). The presence of a chronically ill household member can result in reductions in household income levels from 30-35% [2], as HIV and AIDS result in the reduction of available labor at the household level [17]. Household labor quality and quantity are both affected by HIV and AIDS, first in terms of a reduction of productivity, when HIV-infected persons fall sick, and then when the supply of household labor declines because of patient care and death [18]. This leads in a marked food security difference between households that reported having a household member living with HIV and AIDS and non-affected households, affecting the overall quality of life of the affected households [8]. These reductions in household food security are a result of AIDS in the household [19]. Thus, the pandemic is creating a new category of households particularly vulnerable to famine: those affected by AIDS.

CONCLUSION

Whilst it remains extremely difficult to ascertain the exact impact of HIV/AIDS, evidence provided in this paper shows that there is a significant difference in the expenditure patterns of food and non-food items in affected and non-affected households. People living with HIV/AIDS, their families and communities are being overcome by the effects of the pandemic. Their traditional coping mechanisms are severely compromised by the extra burden of these effects and households are resorting to risky survival strategies such as selling essential assets. The breadwinners and workers (be they farmers or otherwise) are leaving the inexperienced to assume their responsibilities as households struggle to cope in the face of the morbidity and mortality the pandemic brings and the downward spiral leading to poverty, food insecurity and malnutrition.

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Table 1: Socio- demographic characteristics of the respondents

N = 154

	HIV Status	
	Non-affected	Affected
Age of respondents		
Below 17	1 (1.2%)	0 (0%)
18-29	23 (27.7%)	13 (16.9%)
30-39	33 (39.8%)	30 (39.0%)
50 and above	26 (31.3%)	34 (44.2%)
Marital status		
Single	0 (0%)	1 (1.3%)
Married	52 (67.5%)	31 (40.3%)
Divorced	1 (1.3%)	2 (2.6%)
Widowed	27 (31.2%)	43 (58.8%)

Education level of the index households

N = 154

Education level	FREQUENCY	
	Non-affected	Affected
None (no education)	21 (25.3%)	19 (24.7%)
Primary	46 (55.4%)	44 (57.1%)
Secondary	13 (15.7%)	11 (14.3%)
Middle level college	2 (2.4%)	2 (2.6%)
University	1 (1.2%)	1 (1.3%)

Table 2:Prevalence of HIV/AIDS of the affected households

N = 77

HIV Status	
	Number (%)
Living	20 (26%)
Dead	57 (74%)

Prevalence of HIV/AIDS by relationship to caregiver in the “affected” Households

N = 77

Caregiver	Relationship	Prevalence No. %
Wife	Husband	25 (32.5%)
Husband	Wife	4 (5.5%)
Mother/father	Son	27(35.1%)
Mother/father	Daughter	5 (6.5%)
Mother/father	Other relatives	16 (20.8%)

Table 3:Income expenditure on selected food and non-food items

N = 154

	FREQUENCY		
	< 2000	2001 – 4000	> 4000
Food			
Affected	40 (51.9%)	36 (46.8%)	1 (1.3%)
Non-affected	20 (24.7%)	58 (70.1%)	5 (5.2%)
Education			
Affected	77 (100%)	0 (0%)	0 (0%)
Non-affected	58 (75.3%)	2 (2.6%)	17 (22.1%)
Medication			
Affected	69 (89.6%)	8 (10.4%)	0 (0%)
Non-affected	77 (100%)	0 (0%)	0 (0%)
Clothing			
Affected	77 (100%)	0 (0%)	0 (0%)
Non-affected	77 (100%)	0 (0%)	0 (0%)
Fuel			
Affected	77 (100%)	0 (0%)	0 (0%)
Non-affected	77 (100%)	0 (0%)	0 (0%)

Table 4: Reasons for Change in Expenditure Patterns

N = 154

	FREQUENCY	
	Non-affected	Affected
Reason for Change in Expenditure		
Illness	9 (11.7%)	27 (34.6%)
Death	4 (5.2%)	13 (16.9%)
Loss of employment	2 (2.6%)	1 (1.8%)
Lack of money	62 (80.5%)	36 (46.7%)
Prevalence of Illness		
Pneumonia	2 (2.6%)	1 (1.3%)
Tuberculosis	1 (1.3%)	17 (22.1%)
Diarrhoea	1 (1.3%)	17 (22.1%)
Cancer	1 (1.3%)	1 (1.3%)
Malaria	27 (35%)	15 (19.5%)
Chest related ailments	8 (10.4%)	8 (10.4%)
Reasons for Selling Assets		
Medication	1 (1.3%)	24 (31.2%)
Funerals	1 (1.3%)	7 (9.1%)
School fees	11 (14.3%)	2 (2.6%)
Food purchase	1 (1.3%)	23 (29.9%)
Assets not sold	63 (81.8%)	23 (29.9%)

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