

Effect of AIDS on children: the problem of orphans in Uganda *



James P.M. Ntozi

Department of Population Studies, Makerere University, P.O. Box 7062, Kampala, Uganda

Abstract

The problem of orphans is serious in sub-Saharan Africa and has been increasing with the deaths of both parents from AIDS. A study of six districts of Uganda conducted in 1992 investigated the problem. Almost all the orphans are cared for by their extended family members who made the decisions to do so. It is recommended that more assistance be given to the family to enhance its capacity to cope with increased orphans expected in the future.

The orphan problem is increasing daily and reaching crisis levels in sub-Saharan Africa. In the past, the problem was mostly due to the civil strife in many countries in the region and high adult mortality rates. However, in the last decade, the number of orphans has increased dramatically because of the HIV/AIDS epidemic. Preble (1990) has projected that between 1.5 and 2.9 million additional deaths due to AIDS of women aged 15-49 in the 1990s will increase the orphans to between 3.1 and 5.5 million, accounting for 6 to 11 per cent of all children under 15 years, by the year 2000 for ten high HIV-seroprevalent countries of east and central Africa.

An enumeration of orphans in Manicaland province of Zimbabwe in 1991 found that 8.9 per cent of the households had orphans, and 6.8 per cent of total children in age group 0-14 were orphans. Sixty-one per cent of the orphans were living with surviving parents, 80 per cent with mothers after the death of fathers and 17 per cent with fathers following the death of the mothers (Foster et al. 1995).

In Uganda, the 1991 population and housing census enumerated 1,037,228 children below the age of 18 years without at least one parent, representing 11.6 per cent of the total children in the same age groups (Republic of Uganda 1995). The children without both parents (double orphans) were 48,962 boys and 47,886 girls, forming 9.3 per cent of the total orphans. Most of the double orphans are due to the AIDS epidemic which often does not spare either parent.

* This paper benefited from the research assistance provided by Mr. Yovani Lubaale and Immaculate Nakanaabi of Makerere University, and Jacob Oni of the Australian National University as well as from secretarial support of Mrs Ida Kahangi. I am grateful to the Health Transition Centre of the Australian National University and Institute of Statistics and Applied Economics of Makerere University for providing research facilities. The Department of Research Cooperation (SAREC) of the Swedish International Development Agency (SIDA) financially supported the study.

The concern for the orphans in general and AIDS orphans in particular has been raised in many documents because of the care needed to ensure they grow up as normally as possible.

The extended family, government and Non-Government Organizations have tried to cope with the orphan problem. Hunter (1990) reported that successive Uganda governments since 1980 tried to pay school fees to ensure that all orphans get education but the weak economy was an obstacle to this action. According to the 1991 population and housing census, higher proportions of orphans than non-orphans were out of school (Republic of Uganda 1995).

Levine (1995) reports that when a parent dies of AIDS in USA, surviving children face an uncertain future about their custody arrangements and financial benefits. The situation is worse in sub-Saharan countries with reports of dispossession of orphans' property, stigmatization of HIV-positive children and general poverty of rural areas (Ntozi and Mukiza-Gapere 1995).

In this connection, there are now doubts whether the extended family can cope with the orphan crisis in Africa. Fiawoo (1978) reports that among the Konkomba of Ghana, children are distributed to the agnatic kin of the deceased man. This practice was also common among the Shona of Zimbabwe where the paternal family is responsible for the orphans, but this seems to be changing as more maternal relatives of the orphans are taking care of them irrespective of which parent dies (Foster et al. 1995). Although Muller and Abbas (1990) found that the 395 children in Kibuye, Kampala were being looked after by their extended families and surviving parents, they noted that the financial strain involved had led to the households with orphans failing to raise funds to send their own children to school. In rural Masaka, extended family members have given various reasons for failure to care for their relatives who have AIDS, implying that when the parents die, their children may find problems being taken in by the same relatives who refused to look after their parents (Seeley et al. 1993).

Studies in West and East Africa show that children in non-biological parents' homes have problems. Bledsoe, Ewbank and Isiugo-Abanihe (1988) stated that fostered children among the Mende of Sierra Leone were experiencing higher mortality than other children because they were undernourished and had reduced access to modern medicine. In Uganda, the fostering of young children led to kwashiorkor due to loss of appetite among the Baganda (Gaber and Dean 1955).

The orphan problem is further complicated by the age of their carer which may be either too young or too old. In Rakai 43 per cent of the guardians have been found to be over 50 years old (Hunter 1990). The 1991 Uganda census reported that about 15,000 orphans were heading households and over 23,000 were married, expected to make tough decisions on the welfare of the household and coping with the demanding obligations to their wives (Republic of Uganda 1995).

To study these issues about orphans in societies, it is important to make large-scale surveys covering wide areas. Recent population censuses have included questions on orphanhood with the original purpose of using the data in indirect estimation of adult mortality. Some of these data have been used in investigating the status of orphans. For instance the Uganda population and housing census data on orphanhood have been used to show the employment and education status of the orphans (Republic of Uganda 1995). However, Uganda census data cannot be used to carry out a deeper analysis of the orphan problem, especially in regard to their care. This paper uses a baseline survey conducted in six districts of Uganda to examine the orphans and their carers.

The survey

Sources of data and methodology

Because of the paucity of data on HIV/AIDS in Uganda, a baseline survey was conducted between late 1992 and mid-1993 in six districts: Mbale and Iganga in the east, Masaka in the south, Mbarara and Kabale in the southwest and Hoima in the west. Because of security problems at the time, the northern districts were not surveyed. The survey used a structured questionnaire with eight sections on background characteristics of the household, contribution of members to the welfare of their household, mortality since the households were formed, orphanhood and caretaking arrangements, migration and behavioural patterns of widows and widowers, current patient care in the household, attitude towards illness and death in the community and fertility.

In the section on orphanhood and caretaking arrangements the following questions were asked: name of dead parent, whether the dead parent was a father or mother, names and sex of children left behind, ages of children at the time of death of parents, relationship of the carer to the orphan, how the decisions for the orphan care were made and how the orphan has been affected by the death of the parent. A total of 1797 households consisting of urban and rural samples were picked from households which had experienced death in the past ten years before the survey, since 1982 when the first HIV case was identified in Rakai (Serwadda et al. 1985). The secondary unit of the survey was the Resistance Council, the lowest administrative-political unit equivalent to a village. The surveyed Resistance Councils were picked at random from a list in a county (the next administrative unit to the district). The counties had also been picked at random from a list of counties in each of the six districts that had been selected to represent the six major ethnic groups in east, south and western Uganda. The ethnic groups were Baganda (18.8% of the Uganda total population) represented by Masaka, Banyankore (10.2%) by Mbarara, Basoga (8.5%) by Iganga, Bakiga-Bahororo (9.5%) by Kabale, Bagisu (4.7%) by Mbale and Banyoro-Batoro (6.1%) by Hoima. The six districts therefore represented 57.8 per cent of the Uganda African population in the 1991 census (Republic of Uganda 1994).

Data were collected by trained interviewers, and entered and processed in computers at Makerere University. Epi Info version 3.1 package was used in data entry and SPSSPC used in processing, tabulation and analysis.

Distribution of orphans by sex, age and district.

A total of 5,851 persons in the sample were reported to be orphans, but 4,502 only were reported to be aged below 18 years; 744 were 18 years and above and 605 were of unknown ages. We decided to use the 4,502 whose ages corresponded with our definition of child being aged below 18 years. The same definition was used in the 1991 Census (Republic of Uganda 1995). When tabulated, the percentage in each group increases with age up to age ten and then decreases. This pattern is different from the one obtained using the Uganda Census of 1991 (see Table 1). The difference is perhaps due to the bias of the sample towards households with recent deaths, most of whom may have left younger children. Secondly, the age pattern may be a reflection of accumulated deaths due to AIDS since ten years ago when the epidemic is believed to have started, and the declining pattern beyond age ten may represent the pre-AIDS period when orphans were fewer. Furthermore, if we use the normal demographic relationship between age of children and their mothers, namely children of 0-4 years corresponding to 20-24 mothers, 5-9 to 25-29 and 10-14 to 30-34 (UN

1983), it appears that the increasing percentages of orphans correspond to increasing mortality levels due to AIDS which decline after age 30 (Ntozi 1995).

The overall orphanhood prevalence rate for the sample districts is 42.7 per cent (see Table 2) which is high and ranges from the lowest in Mbarara (21.9%) to the highest in Masaka (64.0%). In the middle are Mbale (32.8%), Hoima (34.5%), Iganga (41.8%) and Kabale (59.3%). These contrast with much lower percentages from the 1991 census of Masaka (14.9%), Mbarara (12.0%), Kabale (10.1%), Hoima (9.7%), Iganga (8.0%) and Mbale (7.6%), with overall average of 10.7 per cent. The major difference is that the sample was in households that were almost sure of having orphans given that deaths had occurred there, unlike the census figures covering every household. The average number of orphans per household in the sample was 2.8, which is high.

It is surprising to note that Kabale's proportion of orphanhood is almost as high as that for Masaka, which is known to have experienced higher seroprevalence over the last decade and a half. This result may reflect recent claims that Kabale AIDS deaths may be increasing (Ntozi 1995). In addition, the lower levels in Mbarara and Mbale than in Hoima are unexpected since it has been claimed by ACP that the cumulative deaths in Hoima are below those of the other two districts. A possible explanation may be the smaller numbers of children in Hoima than in Mbale and Mbarara. The Mbale low level is also given by the 1991 census which may imply consistency in the two data sets.

Table 3 presents percentage distribution of orphanhood in the six districts by different causes of death. The overall picture is that the share of cause of orphanhood due to AIDS is generally high at 38 per cent for infants, increasing to 45 per cent in the 1-4 and 5-9 age groups and decreasing to 35 per cent at 15-17 with an average contribution of 43 per cent.

The age pattern of AIDS share of orphanhood causes is similar to the age distribution of orphans in Table 1. The overall share of AIDS related diseases to the causes of orphanhood is low at 11.3 per cent with small differences across the age groups. Other causes of orphanhood contribute slightly more than AIDS at 45.7 per cent.

When the contribution to the cause of death of parents is viewed on a district basis, it is remarkable that all districts except Masaka show other causes dominant. For Masaka, the percentages attributed to AIDS range from 67.8 for infants to 79 in the 1-4 age group, clearly overshadowing other causes with an average of 77 per cent. These levels are close to what Mulder et al. (1994) found in rural Masaka.

A disaggregation of the data into contribution of cause of death of parents by paternal or maternal orphanhood gives revealing patterns. In each of the three categories of causes of death shown in Table 4, more fathers than mothers died with an overall sex ratio of 159 fathers per 100 mothers for all diseases, 124 for AIDS, 151 for AIDS related causes and 260 for other diseases. On a district basis, the ratio of dead fathers to dead mothers ranges from 1.06 in Iganga to 3.0 in Mbarara.

The more interesting pattern is that with the exception of Mbarara the proportional share of the deaths due to AIDS is higher for mothers than for fathers with overall almost half of mothers' deaths attributed to AIDS, implying that in the absence of AIDS, the numbers of maternal orphans would be halved. However, the share of AIDS deaths on overall paternal orphans is not small either since it contributes 39 per cent of the total deaths of fathers. The reason for the lower proportional share to deaths by fathers than mothers is that fathers are more vulnerable to other causes of mortality such as wars and civil strife as well as normal causes of mortality.

Care of orphans

The responses to questions on the care of orphans are summarized in Tables 5 and 6. Table 5 shows that overall surviving parents were caring for their children (40.9%) followed by grandparents (25.1%) and other relatives (19.5%). When these percentages are decomposed into paternal and maternal orphans, the latter are cared for by the grandparents more than by the surviving fathers.

At district level, the care of orphans by relatives varies. The level of care by surviving mothers ranges from 33.6 per cent in Hoima to 65.9 per cent in Kabale, much higher than the care by the surviving fathers which ranges from 26.5 per cent in Masaka to 48.8 per cent in Mbarara. Grandparents as principal carers for orphans contributed the lowest percentage to both paternal (10.9%) and maternal orphans (17.1%) in Mbarara in comparison to Masaka where 36 per cent of paternal and 42 per cent of maternal orphans were helped respectively. The third source of caring was other relatives whose level ranged from 9.5 per cent in Kabale to 29 per cent in Mbale for paternal orphans and from 15.3 per cent in Iganga to 34 per cent in Mbale for maternal orphans. Brothers and sisters also made contributions to orphan care though not much. Friends and NGOs' assistance to orphans was negligible. The level of chi-square significance was very high in all districts implying large disparities between levels of carers.

In Table 6, where care of AIDS orphans is shown, there is a slight change in the overall pattern, with grandparents being the leading carers closely followed by the surviving parents, while other relatives are third. While most of grandparents' care is for AIDS orphans without mothers, the surviving mothers assist the paternal orphans most. Other relatives give almost equal care to the paternal and maternal orphans.

The district patterns of AIDS orphan care show that the grandparents look after the orphans without mothers more than other relatives in four of the six districts and paternal orphans in two districts. For three districts (Kabale, Mbale and Mbarara) the paternal orphans were most cared for by their mothers. Other relatives also do well by dominating the orphan care in Hoima, Iganga, Mbale and Mbarara districts. With the exception of Iganga district the caring levels are significantly different.

Decision-making on the care of orphans

Decision-making on who is to care for the orphans is important in the life of those orphans. The survey probed the households on the person who made the decision and the results are in Tables 7 and 8. In Table 7, it is shown that the majority of the decisions were made by the clan members (29.8%) followed closely by the parents (26.8%) and the orphans themselves (25.4%). Grandparents also made 14.8 per cent of the decisions. Friends and other relatives did not participate much in the orphan care decision-making process.

In all cases, the clan members made decisions for the care of paternal orphans more than the care of maternal orphans except in Kabale district where the reverse was reported. The highest level of clan decision-making was in Mbale where over two-thirds decided on the paternal orphans and 45 per cent on the maternal orphans. The level of clan decision-making was also high in Hoima (37% for paternal and 36% for maternal orphans). The parents made decisions for the care of their children most in Iganga and least in Mbale. With the exception of Masaka and Mbale, more decisions were made by the parents when the father died than in case of the mother's death.

Decisions on what to do next were also made by the orphans themselves. In Hoima, Iganga and Mbale more maternal than paternal orphans made decisions, while in Masaka the pattern was the reverse. In Kabale, the distribution of decision-making between maternal and paternal orphans was about even and it is only in this district that orphans made most of the decisions (49.8% for paternal and 51.8% for maternal orphans). The proportion of grandparents' decisions is also sizeable, especially in Masaka where they made a majority of decisions for maternal orphans (33.4%), but least in Kabale and Mbale. In all cases, the grandparents' decisions are made for the care of maternal orphans more than for the assistance of the paternal orphans.

The majority of the decision makers for the AIDS orphans were the grandparents (34.4%) for a slightly higher percentage of orphans than the clan members (33.5%). The third group of decision makers (27.8%) consisted of either the parents of the children before death or the surviving parent. Most of the decisions by the grandparents are for the children who lost their mothers, while the clan members decided for the paternal orphans more than for maternal orphans. The parents' decision-making is evenly distributed for paternal and maternal orphans.

Regarding patterns by district, the grandparents were leading decision makers in Hoima and Masaka for paternal orphans and Iganga, Masaka and Mbale for maternal orphans. The clan members were dominant decision makers for paternal orphans in Kabale (65.5%) and Mbarara (61.9%) while the parents made decisions that affected paternal orphans in Iganga (44.2%) and Mbale (46.8%) as well as maternal orphans for Hoima (40.7%) and Mbarara (55.6%). A low percentage of orphans made decisions on who should care for them in all districts except for Kabale maternal orphans.

Effect of death of parent on orphans

A question on the effect the death of a parent had on the children was asked and the responses are summarized in Tables 9, 10 and 11. It can be seen from Table 9 that lack of money is the leading problem of orphanhood (57.6%), followed by lack of parental care (31.4%). The other two effects, household split (1.7%) and self-caring (0.3%), are not important. A sizeable percentage of respondents reported that the children were not affected by the death of their parents (9.0%).

When the effect of orphanhood is cross-tabulated with the orphan caretaker, the problem of money becomes most important for the care by the surviving parents, mostly mothers, the grandparents, other relatives and self supporting in that order, implying that the extended family is financially overburdened. Those orphans who are cared for by friends and NGOs experience fewer financial problems than those assisted by the extended family members. However, the orphans with friends and NGOs complain of lack of parental care more than do those under an extended family system. Although the problem of household split is not serious, a higher percentage of respondents complained about friends' care on this issue than on other sources of care. Strangely, no one reported that NGOs split the households.

Regarding the response of 'no effect' on orphans, it is highest among those looking after themselves and under NGOs' care. Also, a sizeable number of orphans under the care of surviving parents, grandparents and other relatives has not experienced any problem. It is noteworthy that most responses indicated that orphans in the care of friends are free of financial problems.

Table 9
Percentages of all orphans by effect of death of parent and caretaker for six districts

Caretaker	Lack of parental care	Lack of money	Household split	Self-caring	No effect	Total	Number
-----------	-----------------------	---------------	-----------------	-------------	-----------	-------	--------

Grandparent	34.0	57.1	1.2	0.6	7.1	100.0	1489
Remaining parent	28.8	61.0	1.3	0.3	8.6	100.0	2326
Other relatives	33.0	55.0	2.6	0.1	9.3	100.0	1326
Friends	65.0	25.0	5.0	0.1	5.0	100.1	20
Themselves	28.0	49.4	2.5	1.0	19.1	100.0	314
NGOs	57.1	28.6	0.0	0.0	14.3	100.0	14
All	31.4	57.6	1.7	0.3	8.9	99.9	-
Number	1724	3163	93	19	490	5489	5489

When AIDS orphans are isolated, Table 10 shows that the dominant effect is still lack of money (54.5%) followed by lack of parental care (34.9%). Other problems contributed only 2.2 per cent. Lack of money affects orphans who are looking after themselves more than those being cared for by relatives. Complaints of lack of parental care came mostly from orphans cared for by other relatives.

To further understand the effect of parents' death on orphans, the responses on effect were broken down into maternal and paternal orphanhood and districts as seen in Table 11. It is clear from the table that orphans with surviving mothers suffer more from financial problems than children with fathers. In contrast, the paternal orphans experience more parental care difficulties than the maternal orphans. Furthermore, the children with mothers reported lack of any problems more than the children with a surviving father.

On the district basis, Hoima orphans were reported to lack parental care most, followed by Iganga and Mbale. Kabale orphans are experiencing financial problems most with Masaka and Iganga and Mbale following. The highest proportion of respondents that reported no orphanhood effect are from Hoima, with Masaka and Kabale next. The chi-square tests between effect on paternal and maternal orphans were significant, implying association between sex of dead parent and effect of the death on the child.

Table 10
Percentage of AIDS orphans by effect of death of parent and caretaker for six districts

Caretaker	Lack of parental care	Lack of money	Household split	Self-caring	No effect	Total	Number
Grandparent	35.3	54.1	0.8	1.1	8.7	100.0	791
Remaining parent	34.7	55.9	1.3	0.4	7.7	100.0	755
Other relatives	36.6	51.7	3.2	0.2	8.3	100.0	538
Friends	57.1	42.9	0.0	0.0	0.0	100.0	7
Themselves	18.4	65.5	1.1	0.0	14.9	99.9	87
NGOs	63.6	36.4	0.0	0.0	0.0	100.0	11
All	34.9	54.5	1.6	0.6	8.4	100.0	-
Number	761	1187	34	13	184	2179	2179

X^2 test $p=0.004$

Other factors that influence the effect of death on infants who were investigated were age and sex of orphans at the time of death of parent and ethnic group of the head of household. The bivariate analysis of age of orphans and impact of death shows a positive association between age and lack of funds and negative association between age and lack of parental care (not presented in a table).

Discussion

The data used by the paper have several limitations including age error, sample design problems, exclusion of northern Uganda and possible misstatements by the respondents. Although the selection of districts, counties, subcounties, parishes and RCs was made randomly, the household was picked on the basis of having experienced death in a recent period. This procedure excludes those households that did not experience deaths and hence leads to over-representation of orphans in the selected RCs. However, this is not a serious problem since the objective of the study is not to enumerate and estimate the number of orphans in the study areas but to study the characteristics of orphanhood.

Because of security problems, the districts in the north and northeastern Uganda were not studied. This leaves out the peculiar characteristics of orphan problems in these districts and makes the study not wholly representative of the Uganda situation. According to the 1991 census the highest orphanhood prevalence rates in Uganda were in these north and northeastern districts (for example, Kumi 18.3%, Soroti 18.1%, Moyo 16.5% and Gulu 16.4%). However, most of the orphan problem in these districts is not due to AIDS or related diseases but to civil strife, insurgency and border conflicts with the Sudan, conditions which are not the primary topic of this paper.

As is usual with data from surveys conducted in sub-Saharan Africa, this information has age errors. Most of these errors arise out of proxy responses, in that heads of households who were the main respondents reported on behalf of orphans and their dead parents and did not know exact ages. Fortunately, this method of age reporting creates digital errors most of which are smoothed out in the broad age groups the paper has used. Data not classified according to ages are free from this error.

The fourth limitation of the data is possibly unreliable reports about orphans from the respondents. Given the previous exercises of enumerating orphans in AIDS-stricken areas in order to identify orphan households for assistance, the respondents believed that our survey had the same objective. It is possible that the households that believed this inflated the number of orphans to get more assistance from government or NGOs. In contrast, those households that feared stigmatization may have reported fewer orphans than they had. Another point that is worth mentioning before the discussion of the findings is the definition of orphans in this paper. Several researchers such as Preble (1990) and Foster et al. (1995) have defined orphans as children under the age of 15 without at least one biological parent. The 1991 Uganda census extended the age to under 18. Our study uses the 0-17 years definition because in Uganda law, persons below 18 years are defined as children or minors. The persons in this age group are exempted from paying poll tax and cannot marry without their parents' consent. A similar definition was used by Hunter (1990) in the enumeration of orphans in Rakai, Luwero and Hoima.

The overall average percentage of orphanhood for the six districts together is 42.7, which is high. However, this level is much lower than that found by Foster et al. (1995) in Manical and Province of Zimbabwe (65%) in 83 orphan households. This implies lower orphan prevalence rates in Uganda than in Zimbabwe. It is also noteworthy that the prevalence level from an enumeration of households in Manicaland was 12.8 per cent (Foster et al. 1995) which is higher than the corresponding Uganda indicator of 11.6 per cent from the 1991 Census (Republic of Uganda 1995).

The five-year age pattern of orphanhood shows that the percentages are high in the first ten years and then decline, which is similar to the normal age distribution. This pattern is made clear by a comparison of Tables 1 and 3 which suggests that the higher percentages of orphans in ages below ten than those older are associated with a greater number of AIDS deaths among younger parents of ages below 35 years than older ones.

On the district basis, Table 3 shows very high percentages of AIDS orphans in Masaka (68-79%). This result is not surprising for the district known to have suffered from the AIDS epidemic for about ten years before the survey and to have one of the highest seroprevalence rates in Uganda (ACP 1994). The finding also confirms results of other studies in the district that AIDS-associated mortality is very high (Mulder et al. 1994). In other districts, non-AIDS causes contributed more to orphanhood than AIDS. This may imply that the effects of AIDS on orphans are not yet fully felt in those districts, perhaps because the epidemic has not reached its peak.

An interesting finding is the maternal-paternal orphanhood pattern in Table 4. A high ratio of paternal to maternal orphanhood is observed in all districts ranging from 1.30 in Masaka to 2.12 in Mbarara, an average of 1.59. This clearly means higher mortality for males than females which is the expected sex ratio of mortality pattern in most populations. The pattern has serious implications for orphans' welfare since it is the fathers more than the mothers that are breadwinners for households and families.

However, with the exception of Mbarara, the average ratio is drastically reduced from 1.59 for all causes to 1.24 for AIDS orphanhood and comes down to 1.06 for Iganga. This is a result of higher AIDS mortality of females than for males (Berkley et al. 1990). Apart from Mbarara, the proportional share of the deaths due to AIDS is higher for mothers (almost a half) than for fathers. This means that in the absence of AIDS, the number of maternal orphans would be halved.

Nevertheless, the overall contribution of AIDS paternal orphanhood is also substantial, almost 40 per cent of all causes of death of parents. The reasons for the lower contribution of AIDS to paternal orphanhood is the greater vulnerability of women to AIDS deaths and the fact that men's deaths are also caused by other factors such as wars and normal mortality. The exception of Mbarara has to do with sex-differential mortality from other causes.

A bivariate logistic regression comparing the AIDS illness to non-AIDS sickness resulted in an odds ratio of 2.3, implying that patients in the six districts were twice as likely to suffer from HIV/AIDS as other illnesses. This result suggests high numbers of AIDS orphans in future.

Table 5 shows that the principal orphan carers are their parents, mostly surviving mothers who may not have the financial means to assist. Fathers also take a substantial caring responsibility. However, as Nalwanga-Sebina and Sengendo (1987) found, the fathers are not good carers for orphans; it appears from this table that most of the maternal orphans are being cared for by grandmothers and other relatives rather than fathers.

It is more revealing to read Tables 5 and 6 together. According to Table 5, the grandparents are the second to the surviving parents in caring for orphans bereaved by AIDS and non-AIDS causes (25.1%). The contribution of grandparents is highest for the care of AIDS orphans (34%) in general and those in Masaka in particular: 42.2 per cent for maternal and 36 per cent for paternal orphans. This result is expected since often both parents die of AIDS and in some cases the surviving parents are also sick and unable to look after the children.

The high proportions of orphans in the care of grandparents observed in Masaka (44.3% for maternal and 40% for paternal orphans) are no surprise given the decade of the AIDS epidemic in the district. Similar figures were reported by Hunter (1990) in the neighbouring district of Rakai: 43 per cent of orphan carers were over 50 years old and 31 per cent of orphans were in the care of grandparents.

As expected, Table 6 shows that maternal more than paternal orphans are cared for by grandparents for reasons already given above. Furthermore, the contribution of other relatives to the care of AIDS orphans is high. This shows the important role of the extended family in orphan care. Other AIDS orphan carers include brothers and sisters whose contribution is not

high, perhaps because only a few of them are old enough to assist. The role of friends and NGOs is negligible; in the presence of extended families, their assistance was perhaps not sought.

Although the percentage of AIDS orphans looking after themselves is generally low, it is relatively high for the maternal orphans and much higher in Kabale. It is disturbing to find that so many AIDS orphans in Kabale have no assistance from either their extended families, friends or NGOs. It may be that these children have been stigmatized and rejected by their families or they have refused to be cared for. Whatever the reason, the long-term psychological and emotional effect on the children is devastating and it will have a serious effect on the community in the future.

Table 7 presents a summary of data on the orphan care decision makers. In most districts, the clan members were the decision makers especially for paternal orphans. This is because the surviving mothers may not be allowed to make the decisions. The high percentage in Mbale reflects the strength of the clan or extended family system in the area. It also indicates that most parents do not make decisions about their children before death. Nevertheless, parents were reported to have made a high proportion of decisions about the care of their children. Most of these parents are the fathers making decisions either through wills before death or when their spouses die. In effect they make the decisions on behalf of their wives whether dead or alive.

The grandparents make the majority of decisions about the care of their grandchildren whose parents died of AIDS (see Table 8). It is probable that the grandparents make the decisions because they are the heads of families even when their children are alive and adult, and they are the final decision makers on family matters. In Masaka district where the proportion of orphan care decisions by grandparents is highest, this may suggest a strong extended family or clan system. Another reason may be the absence of other clan members (uncles, etc.) to make decisions, because of the high mortality from AIDS.

It is further reported that a high percentage of orphans made the care decisions themselves. Many of the orphans affected by this decision may be looking after themselves. However, it is puzzling that over 50 per cent of orphans in Kabale made their own decisions: perhaps it reflects the rebellious nature of children in that society. Reading Table 5 and 7 together shows that most of those decisions were for the surviving mother to look after the orphans. It may be that she consulted the orphans before caring for them and then reported it as the orphans' decision.

In contrast, the participation of the AIDS orphans in the decisions to care for them was marginal. This was perhaps because the family was more willing to help the AIDS orphans who were more desperate than the non-AIDS orphans for assistance from the clan members.

Regarding the effect of illness in the household, it can be seen in Table 9 that the surviving parent, grandparent and other relatives as well as the orphans themselves had problems of lack of money while NGOs and friends did not have as many financial difficulties. The reason is that the former group belongs to the extended family where orphan caring is an obligation without choice. In contrast, friends and NGOs' assistance is purely voluntary and hence they take on the numbers they can manage.

However, the main problem with care by friends and NGOs is lack of parental care which is scored the highest in Table 9. This is perhaps because there is no kin affinity in friends' homes or in orphanages run by NGOs. In the same table, the care by members of the extended family is reported to have least problems with parental care since the children will stay in the circle of relatives which makes the orphans more loved.

It is not possible to explain why Kabale orphans experience more financial problems than the orphans in other districts (Table 11). The reason may be partly to do with the high proportion of paternal orphans being looked after by the surviving mothers. Clearly more paternal than maternal orphans are experiencing many problems.

In order to examine some of the factors influencing the impact of orphanhood, multivariate logistic regression was used to generate odds ratios and levels of significance for orphanhood due to AIDS, AIDS-related causes and other causes of death of parents, which are shown in Table 12.

It is interesting to compare the pattern of odds ratios in each factor. First, the factor of whether the father or mother died may influence the impact of orphanhood. It is seen in the table that the maternal orphans are more likely to be affected by orphanhood problems than paternal orphans irrespective of the cause of death. This is perhaps because surviving fathers are not good guardians of orphans since they may not have the necessary time and patience. However, the higher odds ratio is not significant in the case of AIDS orphans, implying that there is not much difference between fathers' and mothers' caring.

The second displayed factor in Table 12 is the sex of the orphan. The odds ratios show that female orphans are more likely to be affected by problems than male orphans, perhaps because the girls need more care in their childhood than boys need. The more plausible reason is that boys are more likely to be assisted by the family to ensure they succeed and continue the family lineage. However, the difference in odds ratios is not significant, implying that there is not much preference for caring for boys rather than girls.

The age of the orphan in relation to the effect of orphanhood problems was also studied. Similarly to what was indicated above by the bivariate analysis, the logistic regression analysis shows that the oldest age group of AIDS orphans is most sensitive to the orphan problems, perhaps because many of them are double orphans and therefore have both problems of lack of parental care and of lack of money especially for school fees. Of the AIDS orphans, the youngest (infants) are the least affected by orphan problems since they are less aware of what is happening to them and hence adjust more easily to the care by non-parents than do older children. Also, apart from their health, the infants' demands are not as expensive as those of the older orphans and can be met more easily by the carers. It is noteworthy that the levels of significance between odds ratios in the case of AIDS orphans are high, implying that age of orphans at the time of parent's death strongly influences the effect of orphanhood on the child.

As expected, the odds ratios for non-AIDS orphans show that younger orphans are more likely to be affected by problems than the older children. This is perhaps because most of these orphans could have their second parent surviving to help. Another factor influencing the effect of death of parents on orphans is the principal carer. Table 12 shows that AIDS orphans under the care of grandparents and other relatives are more likely to be negatively affected by orphanhood than the rest. This result reflects the strain on the extended family caused by the AIDS orphan problem.

For all causes, orphans with surviving parents are doing better than orphans under the care of other guardians. This is an expected finding, reflecting the fact that a parent is the best person in the life of a child despite the parent's inability to handle the situation. The districts in which the orphans live, as well as the ethnic group to which they belong, are significant factors to this study. They can be discussed together since their results are similar. This is

because the ethnic group forms over 80 per cent of the sample in the district it represents. Table 12 shows that the Bagisu of Mbale were most likely to feel the effect of AIDS orphanhood while the Basoga of Iganga are least likely to be affected. Although Masaka was more likely to feel the impact than Hoima, it is surprising that it is less likely to do so than Mbale and Kabale. The reason is that Mbale and Kabale are less used to the problem than Masaka which has experienced it for a long period. The Baganda AIDS orphans are less likely to be affected than the Banyoro while Hoima is less likely than Masaka. This may be due to ethnic compositions in the districts.

Conclusions and recommendations

From the above it can be concluded that there are high levels of orphanhood in Uganda, making it a very serious socio-economic problem in the country. The proportions of the orphans resulting from AIDS deaths of parents are also high, reflecting the effect of the disease on orphanhood. Almost all the orphans are cared for by their parents and members of the extended family, indicating that the role of the family as a protector is still strong. Most of the decisions to care for the orphans are taken by the family members. The main problems of orphanhood are lack of funds and lack of parental care, affecting paternal orphans and maternal orphans differently and significantly, varying with age of the orphans.

The study shows that the extended family has tried its best to cope with the orphan problem without much external assistance. It is therefore recommended that the family's weak financial capacity to cope with the orphan problem should be countered by external assistance from government and international and local AIDS groups, in order to ensure that the orphans grow up happy and become responsible citizens. Support to income-generating projects for carers may assist families to meet the increasing financial obligations to orphans.

The second recommendation is that in future, researchers should study the two main problems of orphanhood. These are, first, the serious financial problems experienced by family members who are orphan carers. A detailed study of this problem may bring out data that would assist in informing non-family persons and agencies and persuading them to help. The other major problem that needs investigation is the lack of parental care suffered by orphans who are cared for by non-family persons and groups. Such study would identify the sources of the lack of parental care and suggest ways to improve this type of care to meet the needs of the orphans.

Lastly, as was pointed out above, it was not possible to study the northern ethnic groups of Uganda because of insecurity in the area at the time. The exclusion of this area leaves out three major ethnic groups, the Nilo-Hamites, Nilotics and Sudanic-speaking people. In order to ensure that the study is nationally representative it is important that it should be extended to include a subgroup of all major groups and geographical areas. It is therefore recommended that the Iteso of the northeast represent the Nilo-Hamites, the Luo from the middle north the Nilotics, and the Lugbara of the northwest represent the Sudanic-speaking groups.

References

- AIDS Control Programme (ACP). 1994. *AIDS Surveillance Report, December 1994*. Entebbe: Ministry of Health.

- Berkley, S., W. Naamara, W. Okware, R. Downing, J. Konde-Lule, M. Wawer, M. Musagaara and S. Musgrave. 1990. AIDS and HIV infection in Uganda: are more women infected than men? *AIDS* 4:1237-1242.
- Bledsoe, C.H., D.C. Ewbank and U.C. Isiugo-Abanihe. 1988. The effect of child fostering on feeding practices and access to health services in rural Sierra Leone. *Social Science and Medicine* 27,6:627-636.
- Fiawoo, D.K. 1978. Some patterns of foster care in Ghana. Pp. 273-288 in *Marriage, Fertility and Parenthood in West Africa*, ed. C. Oppong, G. Adaba, M. Bekombo-Priso and J. Mogyey. Canberra: Australian National University.
- Foster, G., R. Shakespeare, F. Chinemana, H. Jackson, S. Gregson, C. Marange and S. Mashumba. 1995. Orphan prevalence and extended family care in a peri-urban community in Zimbabwe. *AIDS* 7,1:3-17.
- Gaber, M. and F.R.A. Dean. 1955. Psychological factors in the aetiology of kwashiorkor. *Bulletin of the World Health Organization* 12:471-475.
- Hunter, S.S. 1990. Orphans as a window on the AIDS epidemic in sub-Saharan Africa: initial results and implications of a study in Uganda. *Social Science and Medicine* 31,6:681-690.
- Levine, C. 1995. Orphans of the HIV epidemic: unmet needs in six US cities. *AIDS Care* 7 (supplement 1):S57-S61.
- Mulder, D.W., A.J. Nunn, H.U. Wagner, A. Kamali and J.F. Kengeya-Kayondo. 1994. HIV-1 incidence and HIV-1 associated mortality in a rural Ugandan cohort. *AIDS* 8:87-92.
- Muller, O. and N. Abbas. 1990. The impact of AIDS mortality on children's education in Kampala (Uganda). *AIDS Care* 2,1:77-80.
- Nalwanga-Sebina, A. and J. Sengendo. 1987. Orphaned and disabled children in Luwero and Kabale districts and in Uganda child care institutions: a comparative profile to the general child population. UNICEF document, Kampala.
- Ntozi, J.P.M. 1995. AIDS, morbidity and the role of the family in patient care in Uganda. Paper presented at Workshop on Sexual Networking and Impact of HIV/AIDS in Tropical Africa, Mbarara, Uganda, 15-17 December.
- Ntozi, J.P.M. and J. Mukiza-Gapere. 1995. Care for AIDS orphans in Uganda: findings from focus group discussions. Pp. 245-252 in *The Third World AIDS Epidemic*, ed. I.O. Orubuloye, John C. Caldwell, Pat Caldwell and Shail Jain. Supplement to *Health Transition Review* 5. Canberra: Australian National University.
- Preble, E.A. 1990. Impact of HIV/AIDS on African children. *Social Science and Medicine* 31,6:671-680.
- Republic of Uganda. 1994. *The 1991 Population and Housing Census: National Summary, Uganda*. Entebbe: Ministry of Finance and Economic Planning.
- Republic of Uganda. 1995. *The 1991 Population and Housing Census: Analytical Report Vol II Socio-economic characteristics*. Entebbe: Ministry of Finance and Economic Planning.
- Seeley, J., E. Kajura, C. Bachengana, M. Okongo, U. Wagner and D. Mulder. 1993. The extended family and support for people with AIDS in a rural population in southwest Uganda: a safety net with holes? *AIDS Care* 5,1:117-122.
- Serwadda, D., R.D. Mugerwa, N.K. Sewankambo, et al. 1985. Slim: a new disease in Uganda and its association with HTLV-III infection. *Lancet* 2 (8460):582-585.
- United Nations. 1983. *Manual X: Indirect Techniques for Demographic Estimation*. ST/ESA/SER.A181. New York.

Table 1
Per cent distribution of orphans by age at death of parents, sex and district.

Age	Hoima		Iganga		Kabale		Masaka		Mbale		Mbarara		All		1991 Uganda Census ^a	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0	2.8	5.0	3.1	2.8	6.1	5.9	4.7	4.1	1.5	3.6	4.6	7.6	3.9	4.5	1.2	1.3
1-4	21.1	27.0	29.5	30.2	26.3	29.7	28.0	26.7	26.4	26.6	25.3	19.3	26.7	27.2	11.3	11.7
5-9	33.6	28.5	30.9	35.8	34.1	29.7	31.2	35.5	35.3	31.1	27.0	35.7	32.1	33.0	25.0	25.5
10-14	27.0	25.3	24.6	21.5	25.2	23.8	26.6	24.6	26.1	23.3	30.5	27.5	26.3	24.1	38.5	36.6
15-17	15.6	14.2	11.9	9.8	8.3	10.9	9.6	9.0	10.6	15.4	12.6	9.9	10.9	11.1	24.0	24.8
Total	100.1	100.0	100.0	100.0	100.0	100.0	100.1	99.9	99.9	100.0	100.0	100.0	99.9	99.9	100.0	99.9
Number	289	281	447	358	361	387	722	678	329	305	174	171	2322	2180		
X ² test p=	0.247		0.534		0.247		0.536		0.144		0.235		0.466			

^aSource: Republic of Uganda 1995: Vol II, Table 12.3

Table 2
Percentage of orphaned children in the sample districts.

District	Total children in the sample households	Number of orphans	%
Hoima	1,653	570	34.5
Iganga	1,928	805	41.8
Kabale	1,261	748	59.3
Masaka	2,189	1,400	64.0
Mbale	1,931	634	32.8
Mbarara	1,572	345	21.9
Overall	10,534	4,502	42.7

Table 3
Per cent contribution of cause of death of parents to orphanhood by age and district

Age	Hoima			Iganga			Kabale			Masaka			Mbale			Mbarara			All			Number
	AIDS	Rel	Other	AIDS	Rel	Other	AIDS	Rel	Other	AIDS	Rel	Other	AIDS	Rel	Other	AIDS	Rel	Other	AIDS	Rel	Other	
0	4.8	23.8	71.4	17.4	26.1	56.5	30.2	2.3	67.4	67.8	5.1	27.1	14.3	21.4	64.3	42.9	9.5	47.6	38.1	11.0	50.8	181
1-4	21.5	14.0	64.5	27.2	15.5	57.3	35.0	7.0	58.0	79.3	5.0	15.7	27.7	24.5	47.7	35.7	2.9	61.4	45.1	11.0	43.9	1141
5-9	21.2	12.2	66.7	31.6	13.4	54.9	33.5	9.4	57.1	78.2	6.5	15.3	26.2	28.3	45.5	30.6	7.1	62.2	45.1	12.0	42.9	1367
10-14	22.5	8.5	69.0	23.2	17.7	59.1	27.5	13.2	59.3	77.4	4.4	18.2	30.5	22.0	47.5	24.7	4.5	70.8	42.6	11.0	46.5	1048
15-17	14.1	10.3	75.6	19.3	18.1	62.7	25.4	6.0	68.7	69.8	3.1	27.1	26.0	23.3	50.7	24.3	5.4	70.3	34.7	10.8	54.6	467
All	19.8	11.9	68.3	26.6	15.9	57.5	31.5	8.8	59.6	77.0	5.2	17.8	27.4	24.9	47.7	30.2	5.4	64.4	43.0	11.3	45.7	4204
No.	100	60	345	205	123	444	221	62	418	1030	69	238	157	143	274	95	17	203	1808	474	1922	
X ² test																						
p=	0.276			0.304			0.177			0.034			0.841			0.519			0.002			

Rel = AIDS related causes of death

Other = Other causes of death

Table 4
Per cent contribution of causes of death of parents to orphanhood and the sex ratio of parents by districts

Cause of death	Hoima			Iganga			Kabale			Masaka			Mbale			Mbarara			All Districts			All Parents	Number
	F %	M %	Sex Ratio	F %	M %	Sex Ratio	F %	M %	Sex Ratio	F %	M %	Sex Ratio	F %	M %	Sex Ratio	F %	M %	Sex Ratio	F %	M %	Sex Ratio		
AIDS	16.2	19.7	1.40	23.9	38.3	1.06	24.7	40.9	1.25	71.6	79.2	1.17	26.0	28.2	1.25	35.3	25.0	3.0	38.8	49.6	1.24	43.0	623
AIDS related	13.1	17.1	1.31	18.8	16.0	2.0	8.0	11.4	1.60	5.1	3.8	1.75	24.0	31.0	1.05	7.4	3.1	5.0	11.4	12.0	1.51	11.6	168
Others	70.8	63.2	1.92	57.2	45.7	2.14	66.5	47.7	2.88	23.3	17.0	1.78	50.0	40.8	1.66	57.4	71.9	1.70	49.8	38.4	2.60	45.4	658
Number	96	71	1.35	138	81	1.70	182	88	2.07	275	212	1.30	96	71	1.35	68	32	2.12	889	560	1.59	-	1449
X ² test p=	0.523			0.078			0.011			0.158			0.457			0.343			0.000				

F = Father; M = Mother

Table 5
Percentages of orphans cared for by identity of dead parent and district

Caretaker	Hoima		Iganga		Kabale		Masaka		Mbale		Mbarara		All districts		All orphans
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	
Grandparent	22.1	29.6	18.2	33.6	16.0	29.4	36.0	42.2	12.0	23.1	10.9	17.1	21.7	32.9	25.1
Surviving parent	33.6	33.7	40.3	37.8	65.9	34.6	33.7	26.5	47.0	26.9	61.7	48.8	44.9	32.0	40.9
Siblings	7.1	8.7	11.6	9.5	3.8	3.3	4.6	7.9	9.7	9.7	6.7	4.2	7.0	7.5	7.2
Other relatives	20.9	23.5	26.1	15.3	9.5	21.3	16.8	14.5	29.0	34.3	11.8	24.4	19.2	20.3	19.5
Friends	1.6	0.0	0.0	0.4	0.2	0.0	0.5	0.6	0.4	0.0	0.0	0.0	0.5	0.3	0.4
Themselves	14.6	4.6	2.7	1.9	3.8	10.9	8.2	8.1	1.7	6.0	8.9	8.5	6.4	6.7	6.5
NGOs	0.0	0.0	1.1	1.5	0.7	0.5	0.1	0.1	0.2	0.0	0.0	0.0	0.4	0.4	0.4
Total	99.9	100.1	100.0	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.1	100.1	100.0
Number	425	196	621	262	555	211	927	491	483	216	313	82	3324	1458	4782
X ² test p=	0.002		0.000		0.000		0.014		0.000		0.006		0.000		

Table 6
Percentages of AIDS orphans by caretaker, identity of dead parent and district

Caretaker	Hoima		Iganga		Kabale		Masaka		Mbale		Mbarara		All districts		Total	Number
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother		
Grandparent	40.5	37.0	22.2	33.3	18.4	30.2	40.0	44.3	7.9	50.9	17.9	16.7	30.5	40.4	34.0	642
Surviving parent	25.7	22.2	29.4	31.0	63.2	19.8	32.1	25.2	45.2	9.4	61.9	22.2	38.3	23.7	33.1	624
Siblings	1.4	0.0	6.5	4.8	0.7	1.3	5.0	8.7	10.3	1.9	3.6	5.6	4.9	6.1	5.4	101
Other relatives	32.4	40.7	35.9	26.2	11.8	31.3	18.8	14.0	36.5	32.1	14.3	50.0	22.6	21.5	22.2	418
Friends	0.0	0.0	0.0	0.0	0.7	0.0	0.3	0.8	0.0	0.0	0.0	0.0	0.2	0.4	0.3	6
Themselves	0.0	0.0	2.0	0.0	2.2	17.7	3.7	6.9	0.0	5.7	2.4	5.6	2.6	7.2	4.2	80
NGOs	0.0	0.0	3.9	4.8	2.9	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.8	0.7	0.8	15
Total	100.0	100.0	99.9	100.1	99.9	100.0	99.9	100.2	99.9	100.0	100.1	100.1	99.9	100.0	100.0	-
Number	74	27	153	84	136	96	642	393	126	53	84	18	1215	671		1886
X ² test p=	0.822		0.286		0.000		0.002		0.000		0.007		0.000			

Table 7
Percentages of orphans by orphan care decision maker, identity of dead parent and district

Decision makers	Hoima		Iganga		Kabale		Masaka		Mbale		Mbarara		All districts		All
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	
Grandparent	13.0	16.0	8.0	13.6	6.5	8.2	26.6	33.4	2.7	12.6	2.3	10.4	12.6	19.9	14.8
Clan members	36.7	36.4	30.2	21.5	12.3	16.9	15.2	15.2	69.2	44.7	67.2	32.5	32.1	24.3	29.8
Parents	25.9	20.4	33.5	29.8	29.5	22.1	30.4	27.1	16.7	24.7	16.4	36.4	27.1	26.2	26.8
Themselves	21.9	27.2	23.6	31.8	49.8	51.8	22.7	17.1	10.0	17.9	14.1	19.5	25.0	26.2	25.4
Other relatives	1.0	0	2.6	2.1	1.3	1.0	3.3	5.2	0.9	0.0	0.0	0.0	1.9	2.4	2.1
Friends	1.5	0	2.2	1.2	0.6	0.0	1.8	1.9	0.5	0.0	0.0	1.3	1.3	1.0	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.1
Number	401	162	547	242	536	195	906	479	438	190	256	77	3084	1345	4429
X ² test p=	0.177		0.007		0.222		0.017		0.000		0.000		0.000		

Table 8
Percentages of AIDS orphans by identity of dead parent, care decision maker and district

Decision makers	Hoima		Iganga		Kabale		Masaka		Mbale		Mbarara		All districts		Total
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	
Grandparent	40.5	37.0	23.1	35	19.1	30.2	40.2	44.7	7.9	50.9	17.9	16.7	30.9	40.9	34.4
Clan members	25.7	22.2	30.6	32.5	65.6	19.8	32.2	25.4	45.2	9.4	61.9	22.2	38.7	24.0	33.5
Parents	33.8	40.7	44.2	32.5	13.0	32.3	23.9	22.9	46.8	34.0	17.9	55.6	27.5	27.9	27.8
Themselves	0.0	0.0	2.0	0.0	2.3	17.7	3.8	6.9	0.0	5.7	2.4	5.6	2.7	7.2	4.3
Total	100.0	99.9	99.9	100.0	100.0	100.0	100.0	99.9	99.9	100.0	100.1	100.1	100.1	100.0	100.0
Number	74	27	147	80	131	96	640	389	126	53	84	18	1202	663	1865
X ² test p=	0.808		0.105		0.009		0.019		0.000		0.004		0.000		

Table 11
Percentages of orphans by effect of death on children, dead parent and district

Effect	Hoima		Iganga		Kabale		Masaka		Mbale		Mbarara		All districts		All orphans
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother	
Lack of money	46.9	21.4	58.2	48.3	76.8	52.8	60.2	45.7	70.5	37.2	73.2	35.1	63.6	43.3	57.7
Lack of parental care	42.5	61.3	37.0	47.5	16.1	32.5	23.8	43.3	15.8	49.7	17.9	41.6	25.7	45.3	31.3
HH Split	0.8	0.0	1.1	0.3	0.3	0.9	1.3	1.4	6.3	6.3	1.7	3.9	1.7	1.6	1.7
Themselves	0.0	0.0	0.0	0.0	0.1	0.4	0.7	0.9	0.6	0.5	0.0	0.0	0.3	0.4	0.3
No effect	9.8	17.3	3.7	3.9	6.7	13.4	13.9	8.7	6.9	6.3	7.3	19.5	8.7	9.4	8.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	100.1	100.0	100.1	100.1	100.0	100.0	100.0
Number	480	168	756	358	685	231	1141	575	525	191	358	77	3945	1600	5545
X ² test p=	0.000		0.05		0.000		0.000		0.000		0.000		0.000		

Table 12**Results of logistic regression where the effect of death of parent on orphans is the dependent variable by cause of death**

Independent variables	AIDS only		Cause of death AIDS + AIDS-related		Others		All		
	Odds Ratio	P	Odds Ratio	P	Odds Ratio	P	Odds Ratio	P	
Ethnicity	Nyoro	1.000	-	1.000	-	1.000	-	1.000	-
	Gisu	1.038	0.953	0.649	0.473	2.901	0.241	0.852	0.734
	Soga	0.123	0.031	0.315	0.121	3.906	0.161	0.903	0.840
	Ganda	0.790	0.505	0.717	0.305	10.067	0.0041	1.277	0.425
	Nkore	0.425	0.218	0.311	0.099	8.016	0.016	1.018	0.966
	Kiga	0.373	0.106	0.158	0.001	0.999	0.999	0.308	0.001
	Others	0.975	0.963	0.519	0.209	14.293	0.0014	1.284	0.529
District	Hoima	1.000	-	1.000	-	1.000	-	1.000	-
	Iganga	0.452	0.388	0.117	0.001	1.349	0.583	0.359	0.000
	Kabale	4.303	0.042	2.696	0.085	7.504	0.003	2.241	0.050
	Masaka	2.273	0.171	0.798	0.666	2.870	0.039	1.074	0.831
	Mbale	4.311	0.052	1.142	0.793	2.628	0.023	1.308	0.368
	Mbarara	1.313	0.749	0.397	0.262	1.904	0.261	0.782	0.564
Sex of dead parent	Male	1.000	-	1.000	-	1.000	-	1.000	-
	Female	1.085	0.600	0.917	0.543	1.466	0.014	1.090	0.396
Sex of orphan	Male	1.000	-	1.000	-	1.000	-	1.000	-
	Female	1.026	0.861	1.069	0.609	1.010	0.944	1.005	0.954