

Chapter 6

Deaths, HIV testing and sexual behaviour change and its determinants in northern Uganda

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Abstract

AIDS is a major global health and socio-economic problem. The socio-economic effects of HIV and AIDS are greater in poor societies such as Uganda because the disease draws a lot of resources for health care, and it affects the most productive population groups. Its prevention is difficult since it is largely spread through heterosexual intercourse. The most effective preventive measure is therefore sexual behaviour change.

This chapter uses data from a survey in northern Uganda to examine changes in attitudes towards death, HIV testing and sexual behaviour as a result of AIDS. It was found that attitudes towards deaths have changed and this was because deaths were common. Attitudes towards HIV testing were also positive for most respondents who would like to know their HIV status and plan for the future just in case they are HIV-positive. Some changes in sexual behaviour were reported. However, resistance to sexual behaviour change was observed in some population subgroups.

AIDS is a global problem and its spread is still continuing. The World Health Organization Global Programme on AIDS (1992) estimated that infected adults would number 40 million by the year 2000. It is estimated that, with its high prevalence, sub-Saharan Africa will contribute 68 per cent of the total world AIDS-infected population by the year 2000, and by then 13.8 million people will have died of the disease in sub-Saharan Africa (Way and Stanekki 1993). In Uganda, AIDS is a major cause of death (STD/ACP 1991; Statistics Department and Macro International 1995; UNDP 1997; Ntozi and Kirunga 1997). If AIDS mortality is included, life expectancy is expected to decline to 37 years from 45 (Statistics Department 1995).

In sub-Saharan Africa, HIV is transmitted largely through heterosexual intercourse (World Bank 1991; Goncalves 1994); Miro (1994) reported that in Uganda its rapid spread could be attributed to a high level of sexual activity involving multiple partners and irregular sexual activity. Makumbi *et al.* (1995) observed that multiple sexual contacts, irregular sexual activity and HIV/AIDS rates are higher among long-distance drivers and along the trans-Africa highway which passes through Uganda.

Although HIV is found in all age groups, the most affected age groups are those of adolescents (15-19) and young adults (20-40) (Ntozi, Lubaale and Nakanaabi 1997); it is more prevalent among females than males (Berkeley *et al.* 1990; World Bank 1991; Blanc *et al.* 1995; Bachwayo 1995). Reid and Beiley (1993) found that the social, sexual and economic subordination of women was responsible for their higher risk than that of men.

In northern Uganda, HIV/AIDS infection rates increased rapidly at the beginning of the 1990s (STD/ACP 1995), probably because of social and political disruption in the area. It is also likely that knowledge of the dynamics of the disease was still too low to initiate sexual behaviour change in this region. HIV/AIDS knowledge in Uganda is now universal (STD/ACP 1995; Schopper *et al.* 1995); Barton and Wamai (1994) found that the level of basic knowledge about AIDS, especially that of sexual transmission, was very high. In some populations, despite the wide knowledge about HIV/AIDS, there are still significant misconceptions about routes of transmission, and knowledge of preventive methods appears to be still theoretical (Gonzales 1996). For example women were found to have a poor attitude to prevention compared to males and this was especially the case among prostitutes (Gurung 1996).

In view of the rapid rate of HIV infection, its severe socio-economic and demographic effects in affected populations, and the predominant mode of transmission being heterosexual intercourse, a change of sexual behaviour would be the most important and appropriate prevention method (Ankrah 1987; Rwabukwali 1990). Behaviour change is most important in populations where the spread of infection has not yet reached its peak. Northern Uganda is one of the places where AIDS mortality is still relatively low compared to other parts of Uganda, although the rate of infection increased rapidly after 1990.

This chapter examines the attitudes of the population in northern Uganda towards deaths, HIV testing, and sexual behaviour change and their determinants in the era of high morbidity and mortality in Uganda. The findings throw some light on the most appropriate behavioural interventions to stop or reduce the spread of HIV.

Method

The data are from a survey on 'Evolution of household composition and family structure under conditions of high mortality in northern Uganda'. The Northern Uganda survey was done in the districts of Soroti, Lira and Arua which are inhabited by the Ateso, Langi and Lugbara respectively. These ethnic groups were chosen because they are the largest of the three major language groups of Nilo-Hamites, Luo and Sudanic populations in Uganda.

Both purposive and random sampling methods were used. At the first stage of sampling, two counties with the highest HIV/AIDS prevalence rates were selected from each district; the selection was based on mortality statistics obtained from their medical departments and planning offices. At the second stage, two parishes were randomly selected from each county bringing the total number to four. From each selected parish, five villages were identified from which 20 households were picked, leading to a total of 1206 households from the three districts. The criterion for choosing a household was the occurrence of at least one death in the household over the last ten years.

Among other variables information was collected on attitudes and behavioural changes due to illnesses and deaths in the community. The respondent in the household is the head of household or his or her spouse.

Results

Attitudes towards deaths

Attitudes towards deaths are important for behavioural changes in the context of high morbidity and mortality. To find attitudes towards death respondents were asked whether the way they feel

about death these days is different from the way they felt ten years ago. Table 1 shows that 87.1 per cent of the respondents reported that their attitudes towards death had changed. Most respondents reported that they were shocked at the frequency and pattern of death today more than before. Only 12.9 per cent reported that deaths in their communities were normal.

Differentials of change of attitude were also examined. Table 1 shows that for all demographic and socio-economic groups, the majority of the respondents reported that their attitudes towards death had changed considerably over time. Ethnicity, marital status and occupation of respondents were significantly associated with change of attitude about death. The Lugbara (92.8%) reported a greater change of attitude than the Ateso (81.8%) and Langi (84.5%). Never married (91.7%) and cohabiting (90.2%) respondents also reported a greater change in attitude towards death than the currently married (87.4%) and the separated, divorced and widowed (77.4%). About 91 per cent of non-farmers and 80 per cent of farmers reported attitude change about death. The proportion who reported a change in attitude also increased with the number of people known to be dead from AIDS.

Reasons for change of attitude about death

Respondents were asked why their attitudes towards death had changed in the recent past. Three reasons were given for change of attitude towards deaths in northern Uganda: deaths are too many (65.4%), AIDS (12.6%) and many youths are dying now unlike before (6.9%). Some 15 per cent of the respondents, however, reported that deaths were normal, suggesting no change in attitudes towards death (Table 2). Informal discussions with the Lugbara respondents revealed that these days not many people are bothered when someone dies and activities remain almost unaffected until burial time. Two decades ago activities in a village and neighbouring villages would come to a halt if an adult died. The second reason for attitude change is the fear of AIDS. Some discussions with respondents revealed that AIDS and AIDS-related deaths were becoming increasingly common.

However, Tables 1 and 2 show that resistance to change of attitude towards death was apparent among females, the Ateso and Langi, the separated, divorced and widowed, the uneducated and those who were unemployed. This resistance in attitudes towards deaths is likely to affect change in sexual behaviour.

Table 1
Differentials in change of attitudes towards death by background characteristics

	Changed %	Attitudes No change %	Number	p
Sex				
Male	86.0	14.0	824	
Female	88.1	11.9	219	0.428
Age				
Young adult	86.2	13.8	420	
Old adult	86.7	13.3	618	0.802
Ethnicity				
Ateso	81.8	18.2	346	
Langi	84.5	15.5	291	
Lugbara	92.8	7.2	361	
Other	84.4	15.0	45	0.000
Marital status				
Never married	91.7	8.3	36	
Currently married	87.4	12.6	787	
Cohabiting	90.2	9.8	82	
Sep./div./wid.	77.4	22.6	137	0.007
Current place of residence				
At home	86.6	13.4	1011	
Away	81.3	18.8	32	0.379
Education				
None	82.5	17.5	143	
Primary	87.3	12.7	725	
Secondary	85.5	14.5	166	0.295
Occupation				
Farmer	85.8	14.2	823	
Non-farmer	91.4	8.6	152	
Unemployed	74.2	25.8	31	0.024
Behaviour change				
Change	83.9	8.1	678	
No change	83.9	8.9	307	0.194
Common cause of death				
AIDS + AIDS-related	86.7	13.3	75	
Others	86.6	13.4	926	0.989
Number of persons known dead of AIDS				
5 or less	91.2	8.9	520	
6-10	90.2	9.8	188	
11-15	93.0	7.0	45	
16-20	92.1	7.9	43	
21 or more	100.0	0.0	23	0.602
Number of persons known sick with AIDS				
5 or less	93.8	6.2	349	
6-10	88.0	12.0	85	
11-15	100.0	0.0	15	
16-20	100.0	0.0	20	
21 or more	100.0	0.0	10	0.431
All	87.1	12.9	1043	

Table 2
Differentials in reasons for attitudes towards deaths by background characteristics

	Normal	Many deaths	Many young deaths	AIDS	Number	p
Sex						
Male	17.5	62.0	8.7	11.8	871	0.089
Female	12.5	69.1	5.0	13.4	202	
Age						
Young adult	16.0	66.3	7.3	10.3	406	0.371
Old adult	17.1	61.4	8.2	13.3	655	
Ethnicity						
Ateso	28.4	53.9	2.0	15.8	349	0.000
Langi	11.0	55.6	16.5	16.8	363	
Lugbara	9.8	81.3	6.0	2.9	315	
Other	17.4	71.7	0.0	10.9	46	
Marital status						
Never married	17.9	53.8	12.8	15.4	39	0.196
Currently married	17.6	62.2	8.5	11.7	828	
Cohabiting	7.4	76.5	6.2	9.9	81	
Sep./div./wid.	14.8	66.4	4.9	13.9	122	
Current place of residence						
At home	17.7	64.2	7.3	10.8	985	0.105
Away	10.1	58.9	11.9	19.0	180	
Education						
None	15.4	55.6	8.0	21.0	162	0.020
Primary	16.9	64.6	7.6	10.9	723	
Secondary	15.5	66.7	8.6	9.2	174	
Occupation						
Farmer	17.4	64.0	7.3	11.3	736	0.043
Non-farmer	17.7	66.7	7.1	8.5	141	
Unemployed	13.1	56.2	13.8	16.9	130	
Behaviour change						
Change	17.6	63.2	6.8	12.4	704	0.141
No change	12.3	65.6	9.1	13.0	308	
Number of persons known dead of AIDS						
5 or less	14.9	63.7	7.7	13.8	457	0.168
6-10	13.9	62.7	7.8	15.7	166	
11-15	7.1	88.1	4.8	0.0	42	
16-20	13.9	61.1	11.1	13.9	36	
21 or more	0.0	80.0	5.0	15.0	20	
Number of persons known sick with AIDS						
5 or less	12.7	64.7	8.2	14.4	306	0.256
6-10	16.0	58.7	10.7	14.7	75	
11-15	0	75.0	16.7	8.8	12	
16-20	5.3	73.7	21.1	0.0	14	
21 or more	0.0	50.0	25.0	25.0	8	
All	15.0	65.4	6.9	12.6	1073	

Attitudes to HIV testing

Attitude to HIV testing is an indicator of willingness to establish one's serostatus which has implications for sexual behaviour change. To find attitudes to HIV testing, respondents were asked whether they would go for an HIV test if it were possible to have one. Table 3 shows that the majority of the respondents reported that they are willing to take the HIV test.

Differentials in attitudes towards HIV tests show that ethnicity, marital status, common type of illness and AIDS were significant determinants of the willingness to take an HIV test. Generally, males (88%) were more willing than females (84%) to be tested.

Among the ethnic groups, the Ateso (91.6%) followed by the Langi (90%) reported greater willingness to take the HIV test compared to the Lugbara (81.2%). Differentials by marital status showed that cohabiting (90.2%), currently married (88.3%) and never-married people (86.1%) were more willing to take the test than the separated, divorced and widowed (79.6). However, those reporting non-AIDS-related causes of death were more willing to take the test than those reporting AIDS and AIDS-related causes of illness. The proportion willing to take the HIV test also increased with the number of people known by respondents to be sick or dead of AIDS (Table 3) .

Table 3
Differentials in attitudes to HIV/AIDS test by reasons for testing and selected background characteristics of respondents

	Attitude to HIV/AIDS test		Number	p
	Positive (%)	Negative (%)		
Reasons				
Ascertain status	97.9	2.1	860	
Plan for future	70.0	30.0	80	
Not necessary	8.2	91.8	97	0.000
Sex				
Male	88.0	12.0	824	
Female	84.4	15.6	219	0.166
Age				
Young and middle-aged adults	88.8	11.2	420	
Old adults	86.6	13.4	618	0.285
Ethnicity				
Ateso	91.6	8.4	346	
Langi	90.0	10.0	291	
Lugbara	81.2	18.8	361	
Other	84.4	15.6	45	0.000
Marital status				
Never married	86.1	13.9	36	
Currently married	88.3	11.7	787	
Cohabiting	90.2	9.8	82	
Sep./div./wid.	79.6	20.4	137	0.032
Current place of residence				
At home	87.2	12.8	1011	
Away	87.5	12.5	32	0.965
Education				
None	86.7	13.3	143	
Primary	87.7	12.3	725	
Secondary	84.9	15.1	166	0.618
Occupation				
Farmer	88.3	11.7	823	
Non-farmer	84.9	15.1	152	
Unemployed	80.6	19.4	31	0.243
Behavioural change				
Changed	89.1	10.9	678	
No change	86.3	13.7	307	0.212
Common type of illness				
AIDS+AID-related	73.3	26.7	75	
Non-AIDS	88.6	11.4	926	0.000

Table 3 continued

	Attitude to HIV/AIDS test		Number	p
	Positive (%)	Negative (%)		
Number of persons known sick with AIDS				
5 or less	89.2	10.8	520	
6-10	91.0	9.0	188	
11-15	80.0	20.0	45	
16-20	93.0	7.0	43	
21 or more	95.6	4.3	23	0.179
Number of persons known dead of AIDS				
5 or less	88.3	11.7	349	
6-10	95.3	4.7	85	
11-15	93.3	6.7	15	
16-20	95.0	5.0	20	
21 or more	100.0	0.0	10	0.218
All	86.2	13.8	1043	

Reasons for HIV test

Respondents were asked why they would be willing to take the HIV test. Table 4 presents reasons for taking the HIV test by background characteristics of respondents. Most respondents gave ascertaining their HIV status (81.7%) and planning for the future (8.4%) as reasons. Nearly 10 per cent said it was not necessary to take the test. Only ethnicity and marital status were significantly associated with reasons to take or not to take the test. The Ateso and the Langi were more willing to take the test than the Lugbara; the Lugbara were least willing because they considered the test unnecessary. Although most people in the different marital groups were willing to take the test to ascertain their serostatus, a recognizable proportion of the never-married and the separated, divorced and widowed said it was not necessary. Overall, those who lived away from home, the non-educated and those with only primary education, farmers and non-farmers, and those who knew more than 15 people who were sick or had died of AIDS were more willing to take the HIV test because they wanted to know their serostatus.

However, 12 per cent of those with no education, 12.7 per cent with secondary or higher education, 19.4 per cent of the unemployed, 13.3 per cent of those who knew at least eleven people sick with AIDS, and 7.8 per cent of those who knew five or fewer people dead of AIDS said they would not take the test because it was unnecessary. The negative attitude shown by these people shows that there is still resistance to change of attitude towards HIV testing in some population groups; this is expected to have implications for change in sexual behaviour.

Table 4
Differentials in reasons for HIV testing by background characteristics of respondents

	HIV/AIDS status (%)	Plan for future (%)	Not necessary(%)	Number	p
Sex					
Male	83.9	7.2	8.9	819	0.279
Female	79.4	9.6	11.0	218	
Age					
Young adult	85.7	6.9	7.4	419	0.159
Old adult	81.8	8.3	10.4	614	
Ethnicity					
Ateso	87.8	4.1	8.2	343	0.011
Langi	83.4	8.6	7.9	290	
Lugbara	77.7	10.9	11.4	359	
Other	84.4	4.4	11.1	45	
Marital status					
Never married	80.6	5.6	13.9	36	0.075
Currently married	84.4	7.2	8.4	782	
Cohabiting	85.2	8.6	6.2	81	
Sep./div./widowd.	74.5	10.2	15.3	137	
Current place of residence					
At home	82.8	7.9	9.3	1006	0.636
Away	87.1	3.2	9.7	31	
Education					
None	81.7	6.3	12.0	142	0.264
Primary	84.0	7.8	8.2	720	
Secondary	78.3	9.0	12.7	166	
Occupation					
Farmer	83.4	7.8	8.8	818	0.329
Non-farmer	83.6	7.2	9.2	152	
Unemployed	77.4	3.2	19.4	31	
Behaviour change					
Change	83.9	8.0	8.1	675	0.864
No change	83.9	7.2	8.9	305	
Number of persons known sick with AIDS					
5 or less	81.5	11.0	7.5	518	0.220
6-10	88.3	5.9	5.9	188	
11-15	75.6	11.1	13.3	45	
16-20	88.4	7.0	4.7	43	
21 or more	91.3	8.7	0.0	23	
Number of persons known dead of AIDS					
5 or less	80.2	12.1	7.8	348	0.154
6-10	91.8	5.9	2.4	85	
11-15	93.3	0.0	6.7	14	
16-20	95.0	0.0	5.0	20	
21 or more	90.0	10.0	0.0	10	
All	81.6	8.4	10.0	1037	

Sexual behaviour change

Sexual behaviour change is still the most effective means of controlling the spread of HIV. Current knowledge on HIV and sexual behaviour shows that those who indulge in sex with many partners and casual sex without protection are at a greater risk of catching HIV. Current HIV/AIDS education programs therefore emphasize 'zero grazing', abstinence, and, where these are not possible, use of condoms. Respondents were asked whether they had noticed any change in sexual behaviour as a result of AIDS in their communities.

Table 5 shows that 68.4 per cent reported they noted sexual behaviour change in their communities: 69.1 per cent of males and 67.8 per cent of females. Of the young and middle-aged adults, 71 per cent had noted behaviour change, compared to 67.3 per cent of the old. However, sexual behaviour change is affected by many factors.

Ethnicity, marital status, education, common illnesses reported and the number of people dead of AIDS were found to be significantly associated with sexual behaviour change. The Ateso (79.8%) and the Langi (69%) reported higher rates of sexual behaviour change than the Lugbara. Cohabiting (73%), currently married (70%) and the separated, divorced and widowed (64.3%) reported appreciable levels of behaviour change in the community, but only about half the never-married respondents said that their communities had changed their sexual behaviour as a result of HIV/AIDS. Table 4 shows that sexual behaviour change increases with the level of education .

Table 5
Differentials in reported behaviour change by background characteristics of the respondent

Variables	Behaviour change		Number	p
	Changed (%)	No change (%)		
Sex				
Male	69.1	30.9	783	0.728
Female	67.8	32.2	202	
Age				
Young adult	71.0	29.0	403	0.223
Old adult	67.3	32.7	578	
Ethnicity				
Ateso	79.8	20.2	327	0.000
Langi	69.0	31.0	277	
Lugbara	59.1	40.9	340	
Other	61.0	39.0	41	
Marital status				
Never married	51.5	48.5	33	0.078
Currently married	69.9	30.1	751	
Cohabiting	73.0	27.0	74	
Sep./div./widowed	64.3	35.7	126	
Current place of residence				
At home	68.8	31.2	955	0.888
Away	70.0	30.0	30	
Education				
None	64.2	35.6	132	0.021
Primary	67.5	32.5	687	
Secondary	77.8	22.2	158	
Occupation				
Farmer	70.2	29.8	778	0.182
Non-farmer	62.5	37.5	144	
Unemployed	66.7	33.3	27	
Common illnesses				
AIDS+AIDS-related	53.6	46.4	69	0.007
Others	69.3	30.7	875	
Number of persons known sick with AIDS				
1-5	71.2	28.8	493	0.154
6-10	62.7	37.3	177	
11-15	61.4	38.6	44	
16-20	60.0	40.0	40	
21+	66.7	33.3	21	
Number of persons known dead of AIDS				
1-5	67.3	32.7	339	0.047
6-10	56.4	43.6	78	
11-15	92.3	7.7	13	
16-20	66.7	33.3	18	
21+	50.0	50.0	10	
All	68.4	31.6	985	

Results of hierarchical log-linear analysis in model 1 of Table 6 show that only two combinations of variables were significantly associated at the third-order level. These were: change of behaviour, attitude to HIV test and attitude towards death; and change of behaviour, attitude to death and ethnicity. At the second-order level, several variables were found to be significantly associated. These included: attitude to HIV test and common cause of illness; attitude to HIV test and number of people known to be sick with AIDS; change of behaviour and attitude to death; change of behaviour and ethnicity; number of people known to be sick with AIDS and ethnicity; and attitude to death and ethnicity.

In model 2 of Table 6, one third-order-level association was found to be significant and this involved change of behaviour, attitude to HIV test and ethnicity. Several second-order-level associations were also observed to be significantly associated including: attitude to HIV test and ethnicity; number of people known to be sick with AIDS and number of people known to be dead of AIDS; change of behaviour and ethnicity; attitude to HIV test and ethnicity; and number of people known to be dead of AIDS and ethnicity.

Table 6
Results of multivariate analysis using hierarchical log-linear to test for associations with change of attitudes towards death, HIV/AIDS test and behaviour change.

Variables in the model 1	DF	Chi2	Partial Prob.
Change of behaviour with Attitude to HIV test with Attitude to deaths	3	7.605	0.0549
Change of behaviour with Attitude to death with Ethnicity	9	15.740	0.0725
Attitudes to HIV test with Common cause of illness	3	9.224	0.0265
Attitude to HIV test with Number known sick with AIDS	3	11.987	0.0074
Change of behaviour with Attitude to deaths	3	32.994	0.0000
Change of behaviour with Ethnicity	9	47.750	0.0000
Attitude to HIV test with Ethnicity	3	20.250	0.0002
Number known sick with AIDS with Ethnicity	9	21.409	0.0110
Attitude to deaths with Ethnicity	3	26.696	0.0000
Variables in model 2			
Change of behaviour with Attitude to HIV test with Ethnicity	9	18.555	0.0293
Attitude to HIV test with Ethnicity	3	6.315	0.0972
Attitude to HIV test with Number known sick with AIDS	3	7.989	0.0462
Number known sick with AIDS with Number known dead of AIDS	9	52.070	0.0000
Change of behaviour with Ethnicity	9	49.864	0.0000
Attitude to HIV tests with Ethnicity	3	11.642	0.0087
Number known dead of AIDS with Ethnicity	9	28.703	0.0007

Discussion

Many studies in eastern, central and southwestern Uganda about HIV/AIDS (Ankrah 1987; Berkeley *et al.* 1990; Ntozi and Lubega 1990; Hunter 1990) were able to identify the main pathways of its spread and its demographic and socio-economic determinants. Based on these studies, many government and NGO programs helped in improving specific knowledge on pathways of infection and removal of the social stigma on individuals and families affected by AIDS. This was the first opening for attitude and behaviour changes in these subregions.

In northern Uganda, however, there were few studies and the social disruption in the region meant that infection rates were monitored only in health institutions. Monitoring without appropriate preventive intervention was therefore unable to effectively protect the population of northern Uganda from the spread of the disease. One of the first HIV/AIDS studies in northern Uganda by Schopper *et al.* (1993, 1995) showed that knowledge of HIV/AIDS was almost

universal in one of the northern tribes, the Madi; but there was hardly any change in sexual attitudes and behaviour.

The northern Uganda peasant population had not seen a regular member of their community affected by HIV or AIDS until the early 1990s. Those who would die of AIDS often died in Kampala, Jinja, Entebbe and other urban areas outside the north and were returned to their ancestral villages in the north only for burial. Attitudes towards such people were often unsympathetic. So the initial knowledge of HIV and AIDS was unable to initiate change in sexual behaviour (Anderson *et al.* 1990).

It was only when AIDS mortality started to occur within these communities and when people started seeing family members and relatives ill with AIDS, that they began to discover the realities of AIDS. The experience of HIV and AIDS was therefore more important for the change in attitude and behaviour emerging in northern Uganda than were the lessons that should have been learned from southern Uganda whence the disease was believed to have spread.

Resistance to sexual behaviour change

Changes of attitudes and behaviour beginning to emerge in northern Uganda include use of condoms, reduced number of sexual partners, reduction in extramarital sex, a positive trend towards monogamy, respect for people with AIDS and community support for them. However, there are some indicators of resistance to sexual behaviour change. While there is universal knowledge of HIV/AIDS and its dynamics in northern Uganda (Schopper *et al.* 1993, 1995; STD/ACP 1997), more than 30 per cent of the respondents reported that people have not yet changed their sexual behaviour. Key informants in Arua district reported various behaviour patterns including an early start of sexual activity especially among females, early marriage, polygamy, widow inheritance, casual sex and unprotected sex. Ethnicity, marital status, education and occupation were identified as factors associated with resistance to sexual behaviour change.

Among the three major ethnic groups in the study, the Lugbara in Arua district, who also reported the highest AIDS prevalence rates in the study, were most resistant to sexual behaviour change. The practice of widow inheritance, now disguised as orphan care, is still common among the Lugbara in Arua district. Polygamy is common, and sexual activity and marriage occur at early ages. The social disruption and the presence of refugees in the area may have contributed to resistance to sexual behaviour change. Arua is the largest centre of economic activity in northwestern Uganda, with a busy cross-border trade with the Democratic Republic of Congo and the Sudan. Furthermore, Arua is significantly affected by the long-distance travellers who ferry goods to and from Sudan and Congo. The economic and relief operations in northeastern Congo and southern Sudan may have contributed to the introduction of new modes of sexual networking such as prostitution which may increase the spread of HIV.

Marital status also appears to influence resistance to change in sexual behaviour. The never-married and separated, divorced and widowed persons were resistant to sexual behaviour change; among the never-married, resistance may be due to the desire to find spouses, or it may be the result of adolescent sexual activity which often begins early (Barton and Wamai 1994), unprotected sex, many sexual partners, casual sex and high partner turnover rates (Rivers and Aggleton n.d.). Resistance to sexual behaviour change among separated, divorced and widowed persons may be explained by remarriage and widow inheritance, which may occur for two reasons: first, men's desire for more children, and second, women's need for social and economic security.

Resistance to sexual behaviour change was also noted among those with no education or primary education among non-farmers and the unemployed. The majority of those engaged in non-farming occupations are either traders or casual workers and most of them have little or no education. They are more likely to practise traditional sexual behaviour such as polygamy, widow inheritance and remarriage.

Conclusion

The resistance to sexual behaviour change suggests that the increase in HIV infection in the early 1990s in northern Uganda will continue. There are two possible reasons for resistance to change: lack of significant change in attitudes to sex and reproduction; and deteriorating socio-economic status of the population as a result of the social and political disruption in the area, which has made it difficult for northern people to benefit from the experience of the people of other areas of Uganda where it is believed the disease began. However, some changes are beginning to emerge. These include changes in attitudes to death and HIV testing, mainly because of AIDS. The increasing AIDS morbidity and mortality in the region has made change in sexual behaviour desirable. What needs to be done is to increase monitoring and preventive programs to sustain the emerging patterns of attitudes and behaviour.

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