

Serial marriages and AIDS in Masaka District *



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Abstract

In the process of studying the functioning of households under the conditions of the AIDS epidemic in the districts of Masaka, Kabarole and Rukungiri, information was collected on the marital history of persons aged 12 years and above who had ever been involved in a regular union or marriage. That information allows the discussion of the pattern of marital mobility and the exploration of the possible links between serial marriages and the dynamics of the current epidemic. Serial marriages can be defined as the participation in a sequence of regular partnerships or unions. By this definition, males in polygamous unions are involved in the practice of serial marriages in that they go through the formation of regular unions more than once in their lifetime and are often involved in more than one such union at a time. In the case of females, serial marriage takes the form of transition from first to second and subsequent unions within a monogamous or polygamous framework. This paper describes the pattern of these serial marriages, the causes of the dissolution of unions, and the relationship between the observed patterns and selected social and demographic factors such as sex, residence, education and the household-level experience of a previous HIV/AIDS related illness or death. Particular attention is paid to the role of death of spouse and especially of death from AIDS in the dissolution of unions. Apart from the use of basic descriptive statistics, a hierarchical log linear regression is carried out and the tests of partial association between the fact of serial marriage and selected variables are presented.

The connection between serial marriages and STDs including HIV/AIDS

In any population, particularly those with universal and early marriage, such as is the case in most of sub-Saharan Africa (Althaus 1991; Westoff 1992; Van de Walle 1993), and where the basic form of transition of HIV is heterosexual (Lyons 1994), the role of multiple partnership within the institution of marriage needs to be monitored. This is the background to the interest in the relationship between the form of marriage, the prevalence of other STDs and HIV/AIDS (Nilen 1988; Berkley et al. 1989; Ntozi and Lubega 1992; Berger 1994; Kagimu, Marum and Serwadda 1995). However, there is no conclusive evidence of the lower or higher levels of risks of AIDS in either monogamous or

* The project Household Functioning in the Age of AIDS is being funded by UNFPA. The support is gratefully acknowledged. The opinions expressed in this paper are, of course, those of the authors and do not reflect the position of UNFPA. The authors are grateful for the statistical analysis provided by Richard Tuyiragize, Department of Planning and Applied Statistics, ISAE, Makerere University. polygynous unions. On the one hand polygynous unions may lead to the formation of a wide network of infection because of extramarital liaisons of both males and females involved in

such unions. On the other hand, polygyny may encourage a lower level than monogamy of extramarital sexual contacts.

Early in the epidemic, Berkeley et al. (1989) identified polygamy as a risk factor for HIV infection. It has also been suggested that the instability of the marriage institution facilitates the epidemic in Haiti and in parts of Africa (Bazell 1988). In Uganda, a study identified polygamous marriage, practised by about a third of respondents, as one of three risk factors prevalent among Uganda's Muslim minority (Kagimu et al. 1995). Ntozi and Lubega (1992) also draw attention to the potential link between polygamy and the spread of HIV since it provided another avenue for sexual networking, that is, apart from premarital sex and a high level of extramarital sexual contacts. Another study draws attention to the unequal sexual mores for males and females which makes the marital or sexual contacts of males such a dominant factor of the risk of infection within unions (McGrath et al. 1993).

The fact that women have very weak bargaining positions in matters of sex, inheritance and continued residence in the marital home after the death of a spouse further restricts their freedom of action (*AIDS Health* 1992), that is, outside the institution of marriage. In this connection the practice of the levirate and the access of brothers-in-law to the females among the Ankole must be a further complication of the analysis of the link between form of marriage and disease transmission (Ntozi and Kabera 1988).

The alternative approach in linking marriage with the dynamics of an STD epidemic is to look at how the transition of individuals from one union to another establishes a formal sexual network through which an epidemic may be propagated. This approach draws attention to the fact of dissolution of unions, the reasons for such dissolutions and the possible influence of the epidemic on the rapidity of marital turnover. In this situation, a high mortality among adults from AIDS may in turn raise the level of widowhood and remarriage in the population. This approach is adopted in this paper.

The broad pattern of marital mobility by sex

Male-female ratio and regular partnership

Of the 2432 males and females aged 12 years and above recorded in 1500 households in Masaka District, 59 per cent were female. The number of both sexes who fulfil the condition of either having had a regular partner or having ever married was 2048. This group which is made up of 823 males and 1225 females constitutes the basis of the analysis of serial marriage that follows.

Current marital status by sex

Table 1 shows the current marital status by sex of respondents. Three-quarters of the respondents are married, just over one in ten is widowed and about the same proportion are either divorced or separated. The sharp contrast between the sexes in access to the marriage market is revealed in the proportions of the married and widowed. While fewer than five per cent of men are widowed, the corresponding proportion of women is three times as much. And while nearly nine of every ten are currently married, the female proportion is seven of every ten.

The static picture of the current marital situation already raises questions about the broad picture often painted of the marriage market in sub-Saharan Africa. Marriage may still be early, most adults may be in regular unions at one time or the other; but very significant proportions, especially of males, who were once married are not currently married. They

account for one in every four females over 12 years in Masaka District. One in every ten such females is a widow.

Table 1
Current marital status by sex

Marital status	Males		Females		Total	
	No.	%	No.	%	No.	%
Single	6	0.7	3	0.2	9	0.4
Married	713	86.6	848	69.2	1561	76.2
Widowed	38	4.6	187	15.3	225	11.0
Divorced	4	0.5	31	2.5	35	1.7
Separated	55	6.7	151	12.3	206	10.1
Not stated	7	0.9	5	0.4	12	0.6
Total	823	100.0	1225	100.0	2048	100.0

But beyond these observations on the current marital status lie the dynamics of the formation and dissolution of unions for which additional enquiry was made. Questions were asked about the date of first, second, and last unions, the termination or continuation of such unions and the reasons for dissolution of unions. Where death was the reason, the cause of death was obtained.

Number of lifetime unions

Table 2 shows the number of unions formed by both sexes over their lifetime. We shall use 'number of lifetime unions' and 'lifetime unions' through the present work to refer to such as other terminology is cumbersome. A higher proportion of males have formed second and higher-order unions. Overall 70 per cent of both sexes are involved in their first

Table 2
Number of lifetime unions by sex

Lifetime unions	Males		Females		Total	
	No.	%	No.	%	No.	%
1	507	61.6	936	76.4	1442	70.4
2	197	23.9	203	16.6	400	19.5
3	59	7.2	51	4.2	110	5.4
4	25	3.0	10	0.8	35	1.7
5	12	1.5	4	0.3	16	0.8
6+	16	1.9	2	0.2	18	1.0
Not stated	7	0.9	19	1.6	26	1.3
Total	823	100.0	1225	100.0	2048	100.0

union with the remaining 30 per cent involved in second or higher-order unions. This pool of one in every three adults who have had more than one marital union constitutes the serially married.

Survival of first union and reason for dissolution of first union

As a first step in tracing serial marriage, the survival of first unions was investigated. Table 3 shows that 40 per cent of the first unions reported had ended at the time of the survey. There were no significant differences between the sexes.

Table 3
Survival of first union

Has first union ended?	Males		Females		Total	
	No.	%	No.	%	No.	%
Yes	304	36.9	504	41.1	808	39.5
No	470	57.1	636	51.9	1106	54.0
Not stated	49	6.0	85	6.9	134	6.5
Total	823	100.0	1225	100.0	2048	100.0

The reasons for the dissolution of first unions were investigated. Table 4 shows that although most reasons are gender-neutral, all the same there are significant departures in the profile of reasons given by males and females. For the purpose of this paper, the most revealing information is that a quarter of first unions were ended by the death of the spouse. The death of spouses accounts for the termination of nearly a third of female unions, a level which is twice as high as for males.

Table 4
Reasons for dissolution of first unions

Reason for dissolution	Males		Females		Total	
	No.	%	No.	%	No.	%
Divorce	10	3.3	15	3.0	25	3.1
Separation	84	27.6	114	22.6	198	24.5
Death	49	16.1	151	30.0	200	24.8
Quarrel	11	3.6	11	2.2	22	2.7
No love	6	2.0	11	2.2	17	2.1
Unfaithful	20	6.6	19	3.8	39	4.8
Got married	-	-	5	1.0	5	0.6
Mutual	2	0.7	7	1.4	9	1.1
Changed residence	13	4.3	17	3.4	30	3.7
Family dispute	52	17.1	93	18.4	145	17.9
Financial problems	5	1.6	7	1.4	12	1.5
Changed mind	10	3.3	5	1.0	15	1.9
Husband married	5	1.6	10	2.0	15	1.9
Others	6	2.0	4	0.8	10	1.2
Not stated	31	10.2	35	6.9	66	8.2
Total	304	100.0	504	100.0	808	100.0

Another reason is the high proportion of the unions that were essentially ended because of disagreement from the larger extended-family decision-making body, which has been shown to be powerful in the formation and maintenance of unions in Africa (Ntozi and Lubega 1992). Less remarkable is the number of dissolutions relating to the unfaithfulness of spouses. It is not easy to relate this development to the problems of anxiety about the AIDS epidemic.

Table 5
Causes of death of first spouses

Cause of death	Males		Females		Total	
	No.	%	No.	%	No.	%
Malaria	20	40.8	39	25.8	59	29.5
AIDS	15	30.6	46	30.5	61	30.5
Accident	7	14.3	26	17.2	33	16.5
Bewitched	1	2.0	5	3.3	6	3.0
Miscarriage	1	2.0	-	-	1	0.5
Syphilis	-	-	1	0.7	1	0.5
Cough	1	2.0	8	5.3	9	4.5
Blood pressure	1	2.0	4	2.6	5	2.5
Headache	-	-	6	4.0	6	3.0
Cancer	1	2.0	10	6.6	11	5.5
Others	2	4.1	1	0.7	1	0.5
Not stated	-	-	5	3.3	5	2.5
Total	49	100.0	146	100.0	193	100.0

Cause of death of first spouse

When attention is turned to the 200 unions that ended in death, it is revealed that death from AIDS is the second most frequent reason for men after malaria (Table 5); but for women, AIDS is the most frequent cause of death of their spouses followed by malaria. Malaria is, at times, the proximate cause of death in cases of AIDS; other causes of death that can cloak the AIDS death include cough and cancer. In effect, while there is not likely to be an over-reporting of AIDS, because the protracted illness and weight loss with which it is associated are well known, there is likely to be under-reporting of AIDS-related deaths of those who did not undergo the classic syndrome.

Transition from first to second marriages

About a quarter of all respondents had moved on to form a second union. For some of the 305 males involved, entry into a second union did not necessarily imply the termination of their first union but a transformation of a monogamous into a polygamous marriage.

Of the 577 second unions reported, 40 per cent had ended by the time of the survey; this is about the same proportion of first unions that had been dissolved. The profile of reasons for the dissolution of second unions again confirms death as a major factor, with the same pronounced female loss of spouses (Table 6).

Although there was a high level of non-response to the enquiry about the cause of death of second spouses, AIDS still remains the first cause for females and a close second for males.

Table 6
Reason for dissolution of second unions by sex

Reason for dissolution of second union	Males		Females		Total	
	No.	%	No.	%	No.	%
Divorce	8	6.7	1	0.9	9	3.9
Separation	27	22.5	23	20.4	50	21.4
Death	20	16.7	32	28.3	52	22.3
Quarrel	5	4.2	3	2.7	8	3.4

No love	2	1.7	4	3.5	6	2.6
Unfaithful	9	7.5	5	4.4	14	6.0
Got married	-	-	1	0.9	1	0.4
Mutual	2	1.7	1	0.9	3	1.3
Changed residence	4	3.3	4	3.5	8	3.4
Family dispute	20	16.7	17	15.0	37	15.9
Financial problems	1	0.8	5	4.4	6	2.6
Changed mind	1	0.8	3	2.7	4	1.7
Husband married	2	1.7	2	1.8	4	1.7
Others	-	-	1	0.9	1	0.4
Not stated	19	15.8	11	9.7	30	12.9
Total	120	100.0	113	100.0	233	100.0

Transition from second to subsequent marriage

The proportion of both sexes who moved on to a third or subsequent marriage is 10.1 per cent. The proportion of males is 14.7 per cent and of females 7.1 per cent. There is an increasing recognition of the public health effect on others of those who have been involved in previous households affected by the epidemic. This public health concern was expressed in the qualitative discussions in Masaka District where the high incidence, especially in the township itself, makes the public expression of anxiety about marital and sexual mobility understandable.

Effect of residence on marital mobility

The broad pattern of marital mobility by sex having been established, this section turns to an important but partial determinant of marital mobility among both sexes. The literature on African marriages emphasizes the extent to which urbanization has affected the dynamics of traditional marriage (Caldwell and Caldwell 1993), the emergence of elite marriages (Oppong 1981:7) and the fluid pattern of hybrid forms, not fully traditional and not modern. In such a situation it is to be expected that residence of couples may influence the pattern of marital mobility to be observed.

Current marital status by residence

There is a statistically significant difference between the current marital composition of urban and rural areas ($p=0.0076$). The proportion of the separated people is twice as high in rural as in urban areas and the proportion widowed is two percentage points higher in rural than in urban areas (Table 7).

Table 7
Current marital status by residence

Marital status	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Single	3	0.9	6	0.4	9	0.4
Married	280	81.4	1281	75.2	1561	76.2
Widowed	31	9.0	194	11.4	225	11.0
Divorced	7	2.0	28	1.6	35	1.7
Separated	19	5.5	187	11.0	206	10.1
Not stated	4	1.1	8	0.5	12	0.6

Total	344	100.0	1704	100.0	2048	100.0
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Number of lifetime unions by residence

There is no significant difference between the number of unions over a lifetime reported in urban and rural areas (Table 8). This is consistent with the general popularity of the married state and the central position of the institution in the assurance of security for females. Seven in every ten persons are in their first unions, another two in ten in their second, and the rest in their third or higher-order unions.

Table 8
Number of lifetime unions by residence

Lifetime unions	Urban		Rural		Total	
	No.	%	No.	%	No.	%
1	242	70.3	1200	70.4	1442	70.4
2	63	18.3	337	19.8	400	19.5
3	19	5.5	91	5.3	110	5.4
4	4	1.1	31	1.8	35	1.7
5	1	0.3	15	0.9	16	0.8
6+	-	-	19	1.1	18	1.0
Not stated	15	4.4	11	0.6	26	1.2
Total	823	100.0	1704	100.0	2048	100.0

Survival of first unions by residence

When attention is turned to the survival of unions, the expectation is that the urban situation, especially the economic pressures, may impose strains on marriages, or that the escape of individuals from traditional family life may grant independence of action in matters of formation and dissolution of unions. The evidence in Table 9 confirms a significant difference in the levels of survival of first unions between urban and rural areas ($P = 0.000$). The surprise, however, is that there is more dissolution of unions in rural than in urban areas. Although the rural areas have a strong social control on sexual and related behaviour (Caldwell and Caldwell 1993), the form of unions in rural areas is not as rigidly contractual as the form in urban areas and their dissolution is therefore much easier.

Table 9
Survival of first union by residence

Has the first union ended?	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Yes	108	31.4	700	41.1	808	39.5
No	184	53.5	922	54.1	1106	54.0
Not stated	52	15.1	82	4.8	134	6.5
Total	344	100.0	1704	100.0	2048	100.0

The full range of reasons for dissolution of unions is found in both urban and rural areas (Table 10). The percentage distribution of the reasons is also similar. In both residential areas, the frequency of death as reason for dissolution of union is almost the same, accounting for nearly a quarter of all dissolved unions. One surprise, though, is that the long arm of the

extended family can reach couples in the urban area. Consequently, 14.8 per cent of urban respondents reported family dispute as reason for the dissolution of their first union. This is the third highest reason for both residential areas. Another noteworthy aspect is the undifferentiated role of financial problems in the dissolution of unions. This appears to be a feature of high levels of poverty which will tend to limit the contentious financial decision making between the couple.

Table 10
Reason for dissolution of first unions by residence

Reason for dissolution of first union	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Divorce	4	3.7	21	3.0	25	3.1
Separation	28	25.9	170	24.3	198	24.4
Death	26	24.1	174	24.8	200	24.7
Quarrel	1	0.9	21	3.0	22	2.7
No love	4	3.7	13	1.9	17	2.1
Unfaithful	8	7.4	31	4.4	39	4.8
Got married	2	1.9	3	0.4	5	0.6
Mutual	2	1.9	7	1.0	9	1.1
Changed residence	2	1.9	28	4.0	30	3.7
Family dispute	16	14.8	129	18.4	145	17.9
Financial problems	3	2.7	9	1.3	12	1.5
Changed mind	-	-	15	2.1	15	1.9
Husband married	1	0.9	14	2.0	15	1.9
Others	1	0.9	9	1.3	10	1.2
Not stated	10	9.3	-	-	10	1.2
Total	108	100.0	700	100.0	808	100.0

Cause of death of first spouse by residence

With reference to the 200 unions ended by death, the level of AIDS-related deaths is exactly the same in both urban and rural areas, accounting for 30 per cent (Table 11).

Table 11
Causes of death of spouses in first unions by residence

Cause of death	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Malaria	4	15.4	55	31.6	59	29.5
AIDS	8	30.8	53	30.4	61	30.5
Accident	4	15.4	29	16.7	33	16.5
Bewitched	-	-	6	3.4	6	3.0
Miscarriage	-	-	1	0.6	1	0.5
Syphilis	1	3.8	-	-	1	0.5
Cough	2	7.7	7	4.0	9	4.5
Blood pressure	-	-	5	2.9	5	2.5
Headache	1	3.8	5	2.9	6	3.0
Cancer	5	19.2	6	3.4	11	5.5
Others	1	3.8	2	1.1	3	1.5
Not stated	-	-	5	2.9	5	2.5

Total	26	100.0	174	100.0	200	100.0
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This information however, is probably a feature of the advanced stage of the epidemic during which the rural-urban differential is closed through the circulation of people and the entry of the epidemic into rural areas. The much higher level of malarial deaths reported in rural areas is probably a function of the much poorer housing conditions there, and the lower use of mosquito control than in the urban areas. Some of the reported malaria deaths may be due to immune compromise from HIV infection.

Transition to second unions by residence and by sex

The information on second unions has a built-in time lag which should produce some differences from those observed for the first unions. For one thing, the second unions will be more recent than the first and may shift observations into more recent stages of the epidemic.

There is a higher level of termination of second male unions in urban areas, 18.5 per cent, compared to 13 per cent in rural areas. The corresponding female levels of marital instability of unions are 13 per cent for urban females and eight per cent for rural females: males show a higher level of marital instability than females in both residential areas.

Apart from the fewer cases of second than first unions, the reasons for dissolution of second unions are generally similar to those observed for urban and rural first unions. There is, however, a large difference in proportions of second unions ended by death of first spouses in both residential areas; the rural proportion of second unions ended by death is almost twice as high as the urban proportion.

Marital mobility and household experience of HIV/AIDS

Although some association of remarriage and the presence or absence of HIV is to be expected, it is still worthwhile investigating how marital mobility is linked to the household HIV experience. The investigation is also valid in that it is a comment on the tendency for the clustering of death from AIDS in households resulting from the marital mobility of surviving spouses of deceased AIDS patients. The awareness of the epidemic has not been translated into avoidance of sexual or marital contact with surviving spouses of suspected AIDS patients. This has been observed about Rakai District where the highest prevalence of the epidemic has not radically altered the traditional patterns of sexual contact with widows of those known to have died of AIDS (Bantebya and Konings 1994).

Current marital status by household HIV experience

Over a quarter of married people of both sexes were living in households which had experienced the direct effect of the epidemic. While for males, there is no significant relationship between marital status and the HIV/AIDS affected status of household, Table 12 shows that the marital statuses of females by the type of household in which they are living differ more than those of males.

Table 12
Marital status by household HIV/AIDS status by sex (%)

Marital status	Females		Males	
	Affected	Unaffected	Affected	Unaffected
Married	70.1	68.5	88.0	86.0
Widowed	17.5	14.9	3.8	5.0
Divorced	1.9	2.8	1.0	0.3

Separated	9.4	13.6	4.8	7.5
Total	100.0	100.0	100.0	100.0

Number of lifetime unions by household HIV experience

The possibility that the epidemic itself may be causing a rapid turnover in unions can be tested by a comparison of the number of unions over a lifetime reported in affected households with those in households which have not been affected by HIV. There is no significant difference in the number of unions reported (Table 13). The alternative explanation may be that it is not just the number of unions or of sexual partners that causes an epidemic but the number of discordant couple contacts.

Table 13
Number of lifetime unions by household HIV experience

Unions	Affected household		Unaffected household		Total	
	No.	%	No.	%	No.	%
1	368	70.0	1074	70.5	1442	70.4
2	110	20.9	290	19.1	400	19.5
3	30	5.7	80	5.2	110	5.4
4	6	1.1	29	1.9	35	1.7
5	5	1.0	11	0.7	16	0.8
6	2	0.4	17	1.1	19	0.9
Not stated	5	1.0	21	1.4	26	1.3
Total	562	100.0	1522	100.0	2048	100.0

Table 14
Reason for dissolution of first unions by household HIV experience

Reason	Affected household		Unaffected household		Total	
	No.	%	No.	%	No.	%
Divorce	9	3.0	16	3.2	25	3.1
Separation	59	19.4	139	27.6	198	24.5
Death	97	31.9	103	20.4	200	24.8
Quarrel	5	1.6	17	3.4	22	2.7
No love	3	1.0	14	2.8	17	2.1
Unfaithful	5	1.6	34	6.7	39	4.8
Got married	2	0.7	3	0.6	5	0.6
Mutual	2	0.7	7	1.4	9	1.1
Changed residence	4	1.3	26	5.2	30	3.7
Family dispute	42	13.8	103	20.4	145	17.9
Financial problems	2	0.7	10	2.0	12	1.5
Changed mind	3	1.0	12	2.4	15	1.9
Husband married	3	1.0	12	2.4	15	1.9
Others	2	0.7	8	1.6	10	1.2
Not stated	14	4.6	52	10.3	66	8.2
Total	304	100.0	504	100.0	808	100.0

Reason for dissolution of first unions by household HIV experience

As would be expected, death is a more pronounced feature of dissolution of first unions in the households where illness or death relating to HIV/AIDS was reported. The level of family dispute is much higher for unaffected households than for affected ones. Similarly, a higher level of separation is reported by persons in unaffected households (Table 14).

Table 15
Causes of death of spouses of first unions by household HIV experience

Cause of death	Affected household		Unaffected household		Total	
	No.	%	No.	%	No.	%
Malaria	25	26.3	34	34.0	59	29.5
AIDS	47	49.5	14	14.0	61	30.5
Accident	10	10.5	23	23.0	33	16.5
Bewitched	0	-	6	6.0	6	3.0
Miscarriage	1	1.1	0	-	1	0.5
Syphilis	3	3.2	1	1.0	1	0.5
Cough	1	1.1	6	6.0	9	4.5
Blood pressure	2	2.1	4	4.0	5	2.5
Headache	6	6.3	5	5.0	6	3.0
Cancer etc.	-	-	3	3.0	11	5.5
Not stated	2	2.1	3	3.0	5	2.5
Total	97	100.0	103	100.0	200	100.0

Cause of death of first spouse by household HIV experience

The association between remarriage and household HIV experience suggests that AIDS deaths will not feature in those households which have not been directly affected. This is not wholly true. People move from household to household for various reasons. Consequently, it is possible to find a household in which a death or illness has not occurred but in which someone with a previous history of AIDS death of spouse lives.

The main feature of the information in Table 15 is that half the deaths of first spouses in affected households were from AIDS, compared to 14 per cent in unaffected households. The other feature is the much higher incidence of accidents as cause of death in unaffected households than in affected ones.

Transition to second unions by household HIV experience

Are there more transitions to second unions in households affected by HIV? The overall rate of transition reported was 578 of the 2048 couples responding. This rate of 28.2 per cent is hardly different from the 29.7 per cent in affected and unaffected households. The reason for the dissolution of the second union is not sufficiently well reported to find a bias by the type of HIV experience of households.

Marital mobility and residence and affected households

Table 16 shows the contrast in current marital composition between urban affected and unaffected households. The level of widowhood is almost twice as high in affected households as in those unaffected. The rural households are much less differentiated. This rural pattern may be the effect of poor rural reporting, but this is unlikely, given the fact that rural levels of identified affected households are much higher than urban levels. Another

possibility is that the opportunity for remarriage is undifferentiated between types of status of households in rural areas, while there may be an avoidance of remarriage with spouses from affected urban households.

Table 16
Marital status and HIV/AIDS status by residence (%)

Marital status	Urban		Rural	
	Affected	Unaffected	Affected	Unaffected
Married	74.0	80.0	79.5	75.2
Widowed	15.5	8.7	11.5	11.4
Divorced	3.9	3.2	1.5	1.5
Separated	6.5	8.0	7.8	11.9
Total	100.0	100.0	100.0	100.0

Effect of education on marital composition and mobility

The relationship between marital mobility and education is of public health interest in the context of an epidemic, because education is expected to offer a way for people to acquire information that can influence their behaviour to prevent exposure to infection. There are three stages in the discussion of the vital information on this relationship. The first relates marital composition of both sexes to education level to find out if the pattern of marital transition differs by education. The second addresses the difference, if any, imposed by the residence of individuals on the relationship between composition and education. The third then relates the details of the termination of first and second unions to the education level of the people involved. At this final stage, account is taken of the possible correlation between household HIV/AIDS status and the termination and education.

Male-female ratio by education

The unequal education of the sexes is proverbial in developing countries. Contrary to expectation Table 17 shows that the females are as educated as the males at all levels. This may be an artefact of the interview in which most of the males and females are married to persons within the same education level.

Table 17
Education by sex

	Males		Females		Total	
	No.	%	No.	%	No.	%
None	181	19.2	251	18.6	432	18.1
Primary	347	36.8	490	36.3	834	36.4
Secondary	245	26.0	352	26.0	597	26.0
Tertiary	165	17.5	244	18.1	409	17.8
Others	4	0.4	7	0.5	11	0.5
Total	942	100.0	1351	100.0	2293	100.0

Current marital status by education

Contrary to the theoretical expectation of differences in marital composition on the basis of education, Table 18 shows that there are no significant differences. In fact, a slightly higher proportion of persons are currently married at the secondary education level than at other

levels. Widowhood is also slightly higher among persons with no education and those with post-secondary education than at other levels. The separated form ten per cent of all ever-married people at each education level.

Table 18
Current marital status by education (%)

Marital status	No education	Primary	Secondary	Post secondary	Total
Married	-	0.7	1.0	-	0.5
Widowed	74.5	75.2	78.3	75.3	75.9
Divorced	1.6	2.1	1.0	2.0	1.7
Separated	10.5	10.6	10.3	10.6	10.5
Total	100.0	100.0	100.0	100.0	100.0

Number of lifetime unions by education

Education has generally been postulated as resulting in rising age at marriage, reduction in proportion married and reduction in fertility. Much less is known about the stability of marriage and education. The evidence from this study (Table 19) shows that with rising education level, the proportion of those who form more than one union declines. This is broadly consistent with the argument that the more educated enter more formal and relatively more stable monogamous relationships than the uneducated and less educated.

Table 19
Number of lifetime unions by education (%)

Unions	No education	Primary	Secondary	Post secondary	Others	Total
1	67.5	67.1	75.2	71.1	84.0	70.5
2	24.3	20.8	16.6	17.1	10.3	19.3
3	3.9	6.3	5.0	5.9	3.4	5.4
4	1.0	2.5	0.8	2.6	-	1.7
5	0.5	0.8	0.4	1.5	1.1	0.8
6+	1.6	0.1	1.0	1.5	-	0.9
Not stated	1.0	2.0	1.0	0.3	1.1	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Survival of first unions by education

The additional information on the dissolution of first unions (Table 20) confirms the previous observation that, in general, the unions of the educated appear to be more stable than those of the less educated. While a third of first unions of those at secondary level and higher had ended, the corresponding proportion for those with less education is approaching half.

The reasons for the dissolution of these first unions are shown on Table 21. It would appear that the educated couples are as prone to the major reasons for dissolution as are the uneducated couples. In the critical issue of dissolution by death, the post-secondary educated experience the same level as those in the other education categories. There is also evidence that unions are subject to the controls of family disputes irrespective of the education levels of the couples. The financial issue is more pronounced at the post-secondary level than at lower levels. This is consistent with the fact that income and its disposal become more of an issue with those who have received some education and are gainfully employed in the formal sector.

Table 20
Survival of first union by education (%)

Has first union ended?	No education	Primary	Secondary	Post secondary	Others	Total
Yes	46.6	43.7	34.7	35.4	23.0	39.7
No	48.2	49.3	59.7	55.6	72.4	53.7
Not stated	5.2	7.0	5.6	9.1	4.6	6.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Cause of death of first spouse by education

For the 200 unions ended by death, Table 22 shows the percentage distribution by cause of death. Here again the evidence points to undifferentiated exposure to risks of HIV/AIDS by education level. The sensitivity of malaria deaths to higher education level and better housing conditions is again confirmed.

Transition to second unions by education

The higher stability of the more formal unions formed by the educated is partly confirmed by the lower levels of transition to second unions among those with secondary or higher education than among those with primary or less education. The respective proportions of respondents with no education, primary, secondary and post-secondary education are 27.8, 26.4, 19.6 and 23.2 per cent.

Table 21
Reasons for dissolution of first union by education (%)

How first union ended	No education	Primary	Secondary	Post secondary	Total
Divorce	3.1	3.1	5.7	1.8	3.4
Separated	32.5	26.8	23.6	20.7	26.7
Death	27.5	25.1	27.4	27.9	27.1
Quarrel	1.9	4.1	1.3	3.6	3.0
No love	3.1	1.0	2.5	2.7	2.2
Unfaithful	3.1	5.8	6.4	5.4	5.4
Got married	0.6	1.0	-	0.9	0.7
Mutual break	1.3	0.7	1.3	2.7	1.2
Changed residence	2.5	5.5	5.7	0.9	4.1
Family dispute	18.8	19.9	20.4	18.9	19.4
Financial	1.3	1.4	1.3	3.6	1.6
Changed mind	2.5	2.1	1.3	1.8	2.0
Husband married	1.3	2.4	1.9	2.7	2.0
Others	0.6	0.3	1.3	1.8	1.1
Total	100.0	100.0	100.0	100.0	100.0

Table 22
Cause of death of first spouse by education (%)

Cause of death	No education	Primary	Secondary	Post secondary	Others	Total
Malaria	29.3	31.5	31.7	24.2	42.9	30.3
AIDS	22.0	32.9	34.1	36.4	14.3	31.3
Accident	17.1	17.8	14.6	12.1	14.3	16.9

Bewitched	4.9	2.7	2.4	-	14.3	3.1
Miscarriage	-	-	-	3.0	-	0.5
Syphilis	2.4	-	-	-	-	0.5
Cough	4.9	1.4	7.3	6.1	14.3	4.6
Blood pressure	9.8	1.4	-	-	-	2.6
Headache	4.9	2.7	2.4	-	-	3.1
Cancer	4.9	4.1	7.3	9.1	-	5.6
Others	-	1.4	2.4	6.1	-	1.5
Total	100.0	100.0	100.0	100.0	10	100.0

Tests of partial associations

This section presents the results of hierarchical log-linear regression analysis in which the tests of partial associations between the dependent variable, single or serial marriage formation, and four selected variables were carried out. Those variables are sex, residence, current marital status and type of household HIV experience.

Table 23 shows outcomes of the tests for various combinations of the predictor variables with the outcome variable. The observed significance levels are large for five of the effects. The most prominent is that for current marital status (Q303203), type of residence (ID3TYPERE), and the household previous experience of HIV (ID6AFEUN). In effect, a combination of these three gives a valuable indication of the serial marital experience of individuals.

The robustness of the association is further reinforced by the fact that the set of current marital status, sex and type of residence has a large significance level of association with serial marriage (.7514). Similarly, the set of current marital status, sex and effect of HIV at the household level has a significant level of association with serial marriage(.7775).

The final observation on the tests is the equally large association between serial marriage and the type of HIV experience of households (.7744).

Overall, these observations add strong support to the hypothesized relationship between serial marriage as defined in this paper and the variables presented.

Table 23
Hierarchical log linear results

Tests of PARTIAL associations.

Effect name	DF	Partial Chi ²	Prob	Iter
aQ305205U*Q303203M*ID7SEX*ID3TYPER	1	.100	.7514	3
aQ305205U*Q303203M*ID7SEX*ID6AFEUN	1	.080	.7775	4
aQ305205U*Q303203M*ID3TYPER*ID6AFEUN	1	.000	1.0000	4
Q305205U*ID7SEX*ID3TYPER*ID6AFEUN	1	1.332	.2485	2
Q305205U*Q303203M*ID7SEX	1	1.927	.1651	5
Q305205U*Q303203M*ID3TYPER	1	7.749	.0054	4
Q305205U*ID7SEX*ID3TYPER	1	.714	.3981	4
Q305205U*Q303203M*ID6AFEUN	1	2.455	.1172	5
aQ305205U*ID7SEX*ID6AFEUN	1	.099	.7531	4
Q305205U*ID3TYPER*ID6AFEUN	1	.197	.6575	4
Q305205U*Q303203M	1	253.780	.0000	4
Q305205U*ID7SEX	1	92.797	.0000	4

Q305205U*ID3TYPER	1	4.407	.0358	5
a Q305205U*ID6AFEUN	1	.082	.7744	5
Q305205U	1	85.250	.0000	2
Q303203M	1	201.996	.0000	2
ID7SEX	1	78.588	.0000	2
ID3TYPER	1	1087.001	.0000	2
ID6AFEUN	1	543.772	.0000	2

Note: **a** indicates large observed significance level.

Variable names	=	categories
Q305205U	=	One union, two or more
Q303203M	=	Currently married, Formerly married
ID7SEX	=	Male, Female
ID3TYPER	=	Urban, Rural
ID6AFEUN	=	Affected household, Unaffected household

Discussion and research implications

The paper has illuminated a relationship which has been the subject of extensive speculation. Multiple partnership is implicated in the AIDS epidemic; serial marriage or multiple marriage is a category of multi-partnership with links with the epidemic. This study has shown some of the links operating in Masaka District. In parts of this district 40 per cent of households report having directly experienced illness or death relating to HIV/AIDS. The main ways in which serial marriage operates are as follows.

Nearly four out of ten persons aged 12 years and above who have ever formed a regular union moved on to subsequent unions. The majority of them formed second unions. Analysis of the cause of dissolution of first and some second unions reveals the dominant role of deaths from AIDS. This combined with the lack of avoidance of the widowed increases the likelihood of subsequent unions being formed with HIV-infected partners. The likelihood is further increased with the rising level of prevalence.

There is still more to be done in the clarification of relationships: for example, establishing the level of prevalence and the circumstances of the second and subsequent unions in terms of the marital history of people who form such unions. This will improve the understanding of the pattern of marriages involving persons who were both widowed. Ethnographic information is that the pattern of inheritance of widows is still strong, although this may be declining in urban areas where a higher level of widowhood is reported. This may be transient and merely indicate the number of women who are waiting to form their next union.

There is a case to be made for confronting the public with its cultural practices and their inescapable outcomes. This is partly being done by the public itself, especially in areas where AIDS deaths are perceived as very numerous and cause for public alarm, and where there is a greater readiness to acknowledge that the traditional widow inheritance or active efforts to remarry make it difficult to interrupt the cycle of infection. More confrontational preventive education policy might close the gap between this awareness and cultural change.

References

AIDS Health Promotion Exchange. 1992. Country watch. Uganda. 3:6-7.

- Althaus, F. 1991. Early marriage and childbearing remain common in much of developing world, even as fertility falls. *International Family Planning Perspectives* 17,3:119-120.
- Bantebya, G. and E. Konings. 1994. HIV infection in Uganda (letter). *British Medical Journal* 308 (6931):789.
- Bazel, R. 1988. AIDS watch. A third-world scourge. *Discover*. 9,9:16-18.
- Berger, A. 1994. Women's reproductive health. Women left destitute by AIDS (letter) *British Medical Journal* 308 (6931):789.
- Berkely, S.F., R. Widdy-Wirski, S.I. Okware, R. Downing, M.J. Linnan, K.E. White and S. Sempala. 1989. Risk factors associated with HIV infection in Uganda. *Journal of Infectious Diseases* 160,1:22-30.
- Caldwell, J.C. and P. Caldwell. 1993. The nature and limits of the sub-Saharan African AIDS epidemic: evidence from geographic and other patterns. *Population and Development Review* 19,4:817-848.
- Kagimu, M., E. Marum and D. Serwadda. 1995. Planning and evaluating strategies for AIDS health education interventions in the Muslim community in Uganda. *AIDS Education and Prevention*. 7,1:10-21.
- Lyons, M. 1994. Sexually transmitted diseases in the history of Uganda. *Genitourinary Medicine* 77,2:138-145.
- McGrath, J.W., C.B. Rwabukwali, D.A. Schumann, J. Pearson-Marks, S. Nakayiwa, B. Namande, L. Nakyobe and R. Mukasa. 1993. Anthropology and AIDS: the cultural context of sexual risk behavior among urban Baganda women in Kampala, Uganda. *Social Science and Medicine*. 36,4:429-439.
- Nilen, H. 1988. In two years half the population will be dead from AIDS. [Omtva ar kan Halva befolknigen vara dod i AIDS.] *Vardfacket* 2,7:12.
- Ntozi, J.P. and J.B. Kabera. 1988. Marriage patterns in Ankole, Southwestern Uganda. African Demography Working Paper No. 16. Philadelphia: University of Pennsylvania, Population Studies Center.
- Ntozi, J. and M. Lubega. 1992. Patterns of sexual behaviour and the spread of AIDS in Uganda. Pp. 313-333 in *Sexual Behaviour and Networking: Anthropological and Socio-cultural Studies on the Transmission of HIV*, ed. Tim Dyson. Liège: Editions Derouaux-Ordina.
- Oppong, C. 1981. *Middle Class African Marriages: A Family Study of Ghanaian Senior Civil Servants*. London: George Allen and Unwin.
- Van de Walle, E. 1993. Recent trends in marriage ages. In *Demographic Change in Sub-Saharan Africa*, ed. Karen A. Foote, Kenneth H. Hill, and Linda G. Martin. Washington DC: National Academy Press.
- Westoff, C.F. 1992. Age at marriage, age at first birth, and fertility in Africa. World Bank Technical Paper No. 169. Washington DC: World Bank.