

AIDS in Africa During the Nineties Uganda

Young people, sex, and AIDS in Uganda

**The Uganda HIV/AIDS Partnership
Uganda Ministry of Health
Uganda AIDS Commission
MEASURE *Evaluation* Project**



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Also available:

AIDS in Africa During the Nineties: Uganda. A review and analysis of surveys and research studies. Uganda AIDS Commission; Republic of Uganda Ministry of Health; The MEASURE Project. Carolina Population Center, University of North Carolina at Chapel Hill, 2003.

AIDS in Africa During the Nineties: Ghana. A review and analysis of survey and research results. Ghana AIDS Commission; The MEASURE Project. Carolina Population Center, University of North Carolina at Chapel Hill, 2003.

AIDS in Africa During the Nineties: Young People in Kenya. Kenya National AIDS/STD/TB/Leprosy Control Programme; National AIDS Control Council; The MEASURE Project. Carolina Population Center, University of North Carolina at Chapel Hill, 2003.

AIDS in Africa During the Nineties: Zimbabwe. A review and analysis of survey and research results. National AIDS Council, Ministry of Health and Child Welfare, The MEASURE Project, Centers for Disease Control and Prevention (CDC/Zimbabwe). Carolina Population Center, University of North Carolina at Chapel Hill, 2002.

AIDS in Africa During the Nineties: Tanzania. A review and analysis of surveys and research studies. National AIDS Control Programme, Tanzania; Bureau of Statistics, Tanzania, The MEASURE Project. 2001. Carolina Population Center, University of North Carolina at Chapel Hill, 2002.

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1. INTRODUCTION AND BACKGROUND

Uganda has been frequently cited as a success story in HIV/AIDS prevention, due to the large declines in HIV prevalence that occurred during the 1990s. After the first cases of AIDS were identified in 1982, the number of HIV infections increased rapidly throughout the country. By 1988, an estimated 1 million Ugandans were thought to be infected and Uganda had one of the highest rates of HIV infection in Africa. By 1990, HIV prevalence among women attending antenatal services exceeded 20% at two urban sites (MOH, 2002). After a decade of increasing prevalence, the spread of the epidemic began to wane in the early 1990s. Since 1993, there is evidence of a consistent decline in HIV prevalence among pregnant women and in other populations under surveillance. More important, Uganda's HIV surveillance system has recorded steady declines in HIV prevalence among young pregnant women – indicating that the number of new infections is on the decline.

While there has been a downward trend in HIV prevalence in Uganda after 1992, it is likely that HIV incidence started to decline several years earlier. Based on data from a cohort study in Masaka, it has been suggested that HIV incidence was much higher in the 1980s than in the 1990s and that declines in HIV prevalence after 1992 may reflect declines in HIV incidence during the late 1980s (Low-Ber, 2002).

Adolescents are at particularly high risk for HIV infection as they become sexually active. This is particularly true for young women who initiate sexual activity with partners who are older and, consequently, are more likely to be HIV-infected. HIV prevention programs aimed at reducing risk behavior among youth are particularly important for protecting this vulnerable group, as well as for stemming the spread of HIV.

AIDS prevention programs for youth have focused on:

- increasing knowledge about HIV and how it is transmitted and can be prevented;
- encouraging young people to delay the age at which they first have sex;
- encouraging young people to abstain from sex;
- encouraging those who are sexually active to have just one partner; and
- encouraging use of condoms if having sex with someone other than a spouse.

Adolescents have been the specific focus of several different AIDS prevention campaigns in Uganda. One of the earliest interventions in Uganda was the School Health Education Program (SHEP), a school-based program established in 1987 by the Ministry of Education. The program focused on promoting AIDS prevention practices to youth in schools with an emphasis on delaying sexual debut. Straight Talk began in October 1993 as part of the media campaign of Safeguard Youth from AIDS (SYFA), a collaboration between the United Nations Children's Fund (UNICEF) and the Government of Uganda through the Uganda AIDS Commission and the Ministry of Health. SYFA worked with government agencies and nongovernmental organizations to reduce HIV and other sexually transmitted infections (STIs) among sexually active youth and to encourage young people to postpone sex. In addition, a national campaign

promoting safer sexual behavior among Ugandan adolescents, including abstinence, partner reduction, and condom use began in 1995. The campaign promoted HIV prevention messages through songs and soap operas, rap music contests, drama, a newsletter, and posters. In addition to adolescents, children have been targeted through drama programs and other AIDS education activities conducted in primary schools.

Objective

An understanding of the changes in AIDS related knowledge and behavior may help explain the declines in HIV prevalence that have occurred in Uganda as well as identify those behaviors that may have changed in response to HIV prevention programs. In addition, it provides information on the current state of the epidemic in Uganda for planning future AIDS prevention efforts among youth.

Data sources

This report brings together existing information about knowledge of AIDS and sexual behavior among adolescents during the 1990s in Uganda. It draws primarily on the Ugandan demographic and health surveys (UDHS) conducted in 1988-1989, 1995, and 2000-2001 (MOH and IRD/Macro Systems, Inc., 1989; Statistics Department [Uganda] and Macro International, 1996; and UBOS and ORC Macro, 2001), hereafter referred to in this report as UDHS generically, or UDHS and the year of publication for a specific study. The UDHS are nationally representative sample surveys conducted among women and men of reproductive age (although no men were included in the 1989 survey). This report uses data from the respondents, who were 15-24 years of age at the time they were included in the surveys.

As UDHS data on HIV/AIDS related knowledge and behavior from the early part of the decade are limited, results from a secondary analysis of the 1989 and 1995 World Health Organization (WHO)-supported Global Programme on AIDS (GPA) surveys are also presented (GPA, 1989; GPA, 1995). However, because the 1989 survey covered only eight districts and the 1995 only four, and both surveys significantly over-sampled the capital city of Kampala, the results from the GPA surveys are not compared directly with the UDHS.

The trends in indicators of AIDS related knowledge and behavior obtained from the two surveys are interpreted in light of the decline in HIV prevalence in Uganda from the national HIV sero-surveillance system. Trend analyses are complemented by results from sub-national surveys and other research findings. This includes the behavioral surveillance surveys conducted routinely in selected districts by the Ministry of Health, as well as other studies that have collected data at two or more points in time thereby allowing for an assessment of changes in indicators over time.

Chapter 2 presents the some background characteristics of young men and women in Uganda and illustrates some of the changes that have occurred during the 1990s. Chapter 3 presents HIV and AIDS related knowledge. Chapter 4 examines in detail changes in the age of sexual debut and age at first marriage, while chapter 5 looks at other indicators of sexual behavior. Chapter 6 presents data on condom knowledge and use. Finally, chapter 7 presents trends in HIV prevalence from sentinel surveillance and other sources.

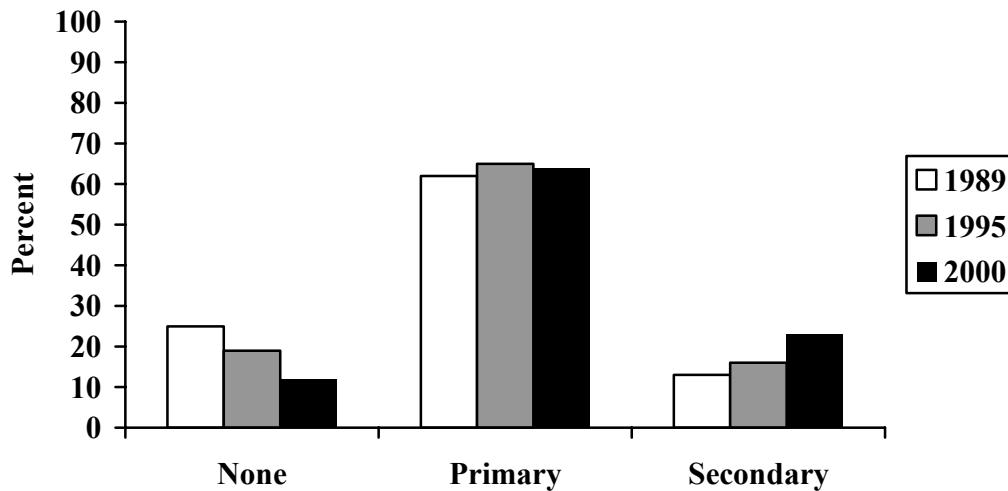
2. CHARACTERISTICS OF YOUNG MEN AND WOMEN

This chapter presents an overview of the socio-demographic characteristics of the young men and women 15-24 years of age interviewed in each survey. Trends in HIV/AIDS indicators must be interpreted while considering changes in socio-demographic characteristics that took place in Uganda throughout the 11-year span. Because the GPA surveys did not sample all districts, the discussion around demographic changes in Uganda is based on UDHS data, which are nationally representative. Data regarding age, education, marital status, and place of residence of the UDHS respondents are presented in Appendix A, Table A.2.1. For reference, similar background information on the GPA respondents is presented in Appendix B, Table B.2.1.

Education

Education is an important determinant of many lifestyle factors and it is worth noting the changes in educational levels of youth that have occurred in Uganda in the nineties. In each of the UDHS surveys, most young women (between 62% and 65%) reported that the highest level of schooling they attended was primary school (Figure 2.1.a). While the percent of women attending primary school changed little during the nineties, there was a shift to fewer women receiving no formal education and more women receiving a secondary education. The percentage of young women who received no education declined by about one-half (from one-in-four to about one-in-eight) while the percentage who completed some secondary education or higher almost doubled.

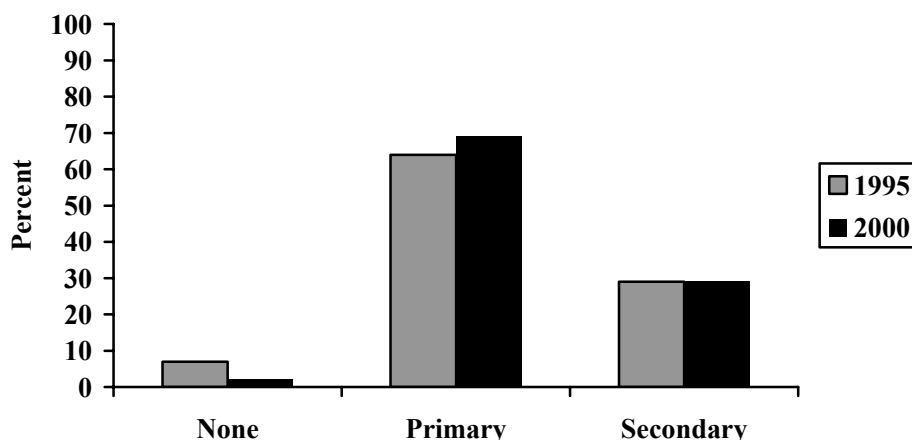
Figure 2.1.a. Education: Level of schooling of young women.



Most young men in 1995 and 2000 also reported that the highest level of education they attended was primary school (64% and 69%, respectively) (Figure 2.1.b). There was a small increase in the percent of young men who attended primary school with a corresponding decline in the percent

who did not attend school at all. However, unlike women, there was no difference between 1995 and 2000 in the percent of young men who attended secondary school.

Figure 2.1.b. Education: Level of schooling of young men.



Overall, young men are more educated than their female counterparts. In 1995, for example, a larger percentage of men had attended any school (93% men, 81% women). Throughout the nineties, however, the gap between the educational attainment of young women and men narrowed somewhat. By 2000, young men were still more likely than women to attend school, although there was little difference (5 percentage points) in the percent of young women and men who attended primary school. Moreover, in 2000, women were only slightly less likely than men to attend secondary school or higher (23% women vs. 29% men) compared to 1995, when young men were almost twice as likely as young women to attend secondary school.

Residence and migration

As in many countries, while most people live in rural areas, there is an increasing shift toward urban residence (Figures 2.2a and 2.2b). In 1989, 13% of the female respondents lived in urban areas and this percentage increased steadily throughout the nineties to reach 20% by 2000. A similar increase is seen for young men with 20% of young men living in urban areas in 2000, up from 15% in 1995.

Respondents were also asked how long they had lived at their current location. In this report, a migrant is defined as someone who has lived in his or her current location for less than five years. Among 15-24 year olds, migration increased throughout the nineties and women were more likely than men to have migrated. In 1989, 67% of the young women had lived at the same location for at least five years. By 1995, this figure had declined to 47% and at that point seemed to stabilize. By the end of the decade, 48% of women in this age group had lived in the same location for at least five years. Among young men, 76% had lived at the same location from 1990 to 1995, while 71% did so between 1995 and 2000. In 1989, only 6% of the young women interviewed had migrated to an urban area; by 2000, this had increased to 14%. Although nationally, there is a trend toward urban residence, most of the migration in the country occurs

between rural areas. Migration to rural areas (from both urban and other rural areas) increased, from 27% in 1989 to 41% in 1995 and declined somewhat to 38% among young women. Among young men, the percent who had recently migrated to a rural area increased from 15% to 18% between 1995 and 2000. The increasing mobility of youth has implications for both spreading information about AIDS prevention as well as in the spread HIV itself.

Figure 2.2.a. Urban-rural residence of young women.

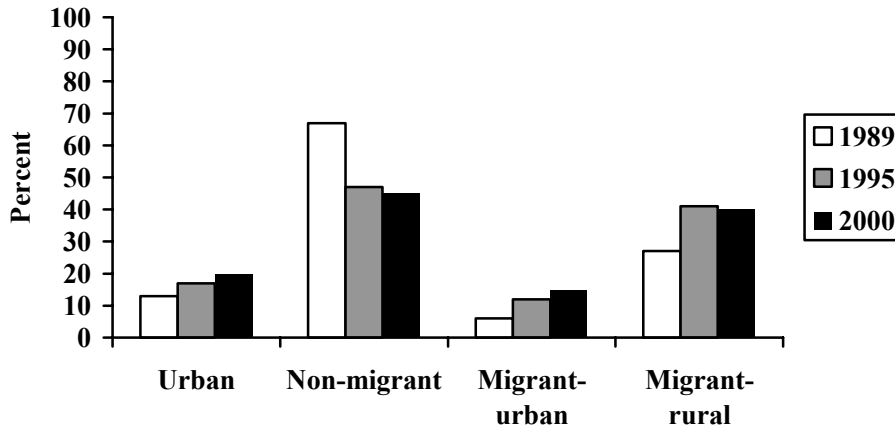
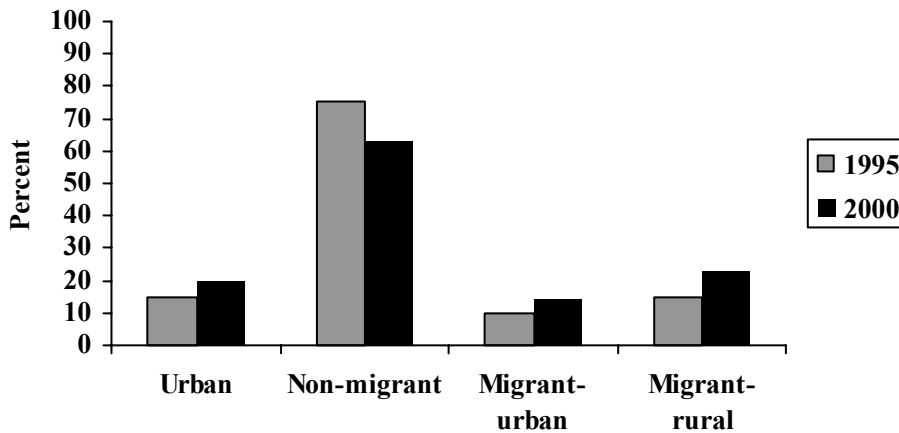


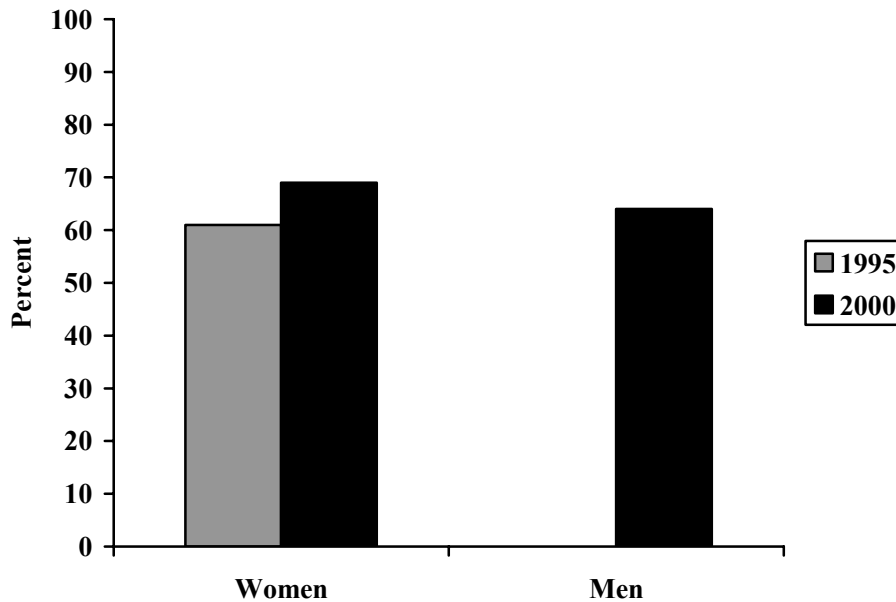
Figure 2.2.b. Residence of young men.



Employment

Because it is likely that many of the younger (aged 15-19) women and men were still in school at the time of the survey, many may not yet have entered the workforce. For this reason, 15-19 year olds were excluded from the calculation of employment rates. During the later part of the nineties, there was an increase in the percent of young women who were working, from 61% to 69% in 2000¹ (Figure 2.3). This was slightly higher than the percentage of 20-24 year old men who were employed, 64% in 2000. Data on women's employment collected during the 1989 UDHS were not comparable to those data for 1995 and 2000, and employment data on men were not collected before the 2001 UDHS.

Figure 2.3. Percent of respondents who were employed.

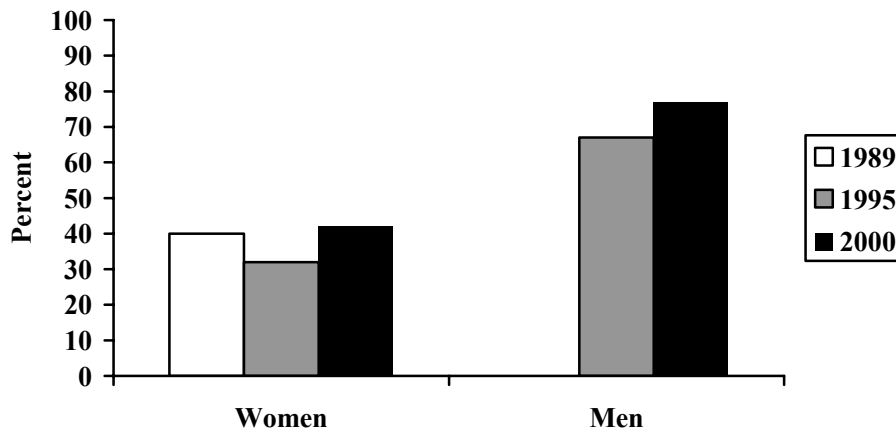


¹ The employment question differed slightly between the 1995 and 2000 surveys – the 1995 questionnaire asked respondents if they were currently working, while the 2000 asked if they had worked in the past seven days.

Marriage

In the mid-nineties, there was a decline in the percent of young women who had not yet married, from 40% in 1989 to 32% in 1995 (Figure 2.4). This was followed by an increase in the second half of the nineties to 42% by 2000, which is similar to the percentage in 1989. While there was no overall trend seen for women, it does appear that young men are delaying marriage. In 1995, 67% of men age 15-24 had never been married; while by 2000, this had increased to 77%. The topic of marriage among young people and age at first marriage is discussed in more detail in Chapter 4.

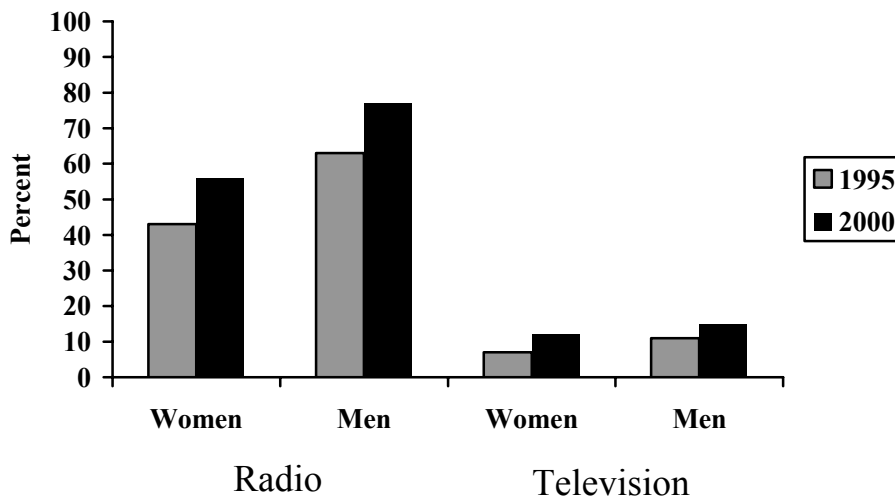
Figure 2.4. Percent of youth aged 15-24 years never married.



Exposure to mass media

The mass media are important tools for informing the population about HIV and how to prevent infection, as well as for encouraging positive behavior change. On average, more young women and men report listening to the radio weekly than watching television weekly (Figure 2.5). As shown in Table A.2.2, throughout the nineties radio listenership and television viewership increased among young women and men. In each survey, young men were more likely than women to report exposure to each of the three types of media listed (radio, television, and printed media such as newspapers and magazines). In urban areas in 2000, 39% of young women and 48% of young men reported watching television weekly. Television, which for a long time was inaccessible to the public in developing countries, is now an important media outlet reaching young urban audiences.

Figure 2.5. Media exposure: percent of youth who listen to the radio regularly and watch television weekly.

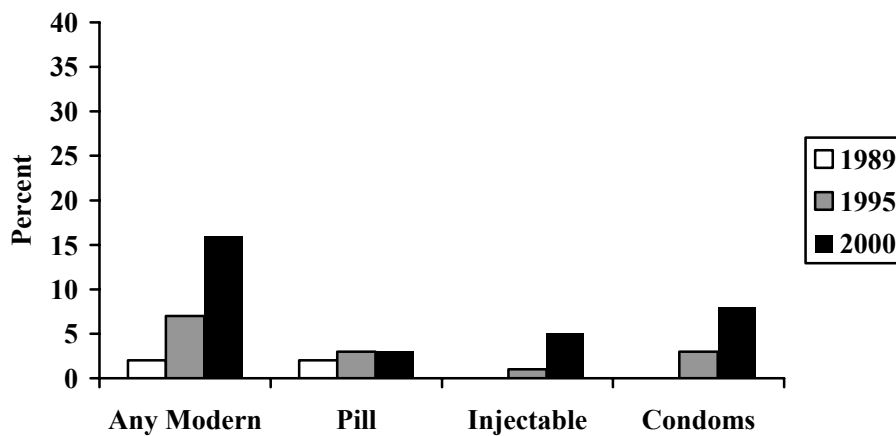


Contraceptive use

There was a large increase in the use of modern contraceptives by women during the 1990s. Data on the use of modern contraceptives are presented by background characteristics in Table A.2.3 of Appendix A. Figure 2.6 presents data on the percent of sexually active women using modern contraception by age group and the methods of choice among women.² In 2000, 16% of young women were using modern contraception. While this is quite low, it is slightly higher than the national average of 14% among all women of reproductive age and it reflects a substantial increase from the 2% of young women who reported using modern contraception in 1989. The increase in modern contraceptive use was driven primarily by increases in the use of injectables and condoms; and condoms have become the most popular family planning method among young women. Use of modern contraception is almost four times as high in urban areas compared with rural areas and is three times more common in single than in married women.

While the increase in contraceptive use is encouraging, the majority of sexually active young women are not using contraception; and thus are at risk not only for unintended pregnancies, but also for HIV and other STIs.

Figure 2.6. Current use of modern contraceptives among sexually active young women.



² The following methods were classified as “modern” for this analysis: pill, IUD, injectables, implants, vaginal methods, condoms, and sterilization. The lactational amenorrhea method (LAM) was not classified as a “modern” method in this analysis, although it is included among the modern methods in the UDHS report.

Summary

At the end of the nineties, young people in Uganda were somewhat different from those who came of age in the late eighties. The most significant changes occurred among women. Overall, young women today, are more likely to have attended school, more likely to use modern contraception, and more likely to have migrated recently compared to young women in 1989. Both women and men are more likely to listen to the radio and watch television. Migration is common and although most migration occurs between rural areas, the percent of women and men living in urban areas is growing. Changes throughout the nineties in indicators of HIV/AIDS-related knowledge and attitudes, sexual behavior, and condom use are presented in the chapters that follow. These changes occurred within the context of a changing social environment for young people in Uganda, which must be kept in mind as relevant background as we explore AIDS-related indicators.

3. HIV/AIDS-RELATED KNOWLEDGE

This chapter presents indicators of AIDS awareness, knowledge of HIV transmission and prevention. It also explores the existence of misconceptions about HIV transmission and AIDS. As the AIDS module was not added to the UDHS until 1996, and not all of the indicators in this chapter could be calculated from the GPA, much of the chapter focuses on the late nineties. Not all of the indicators in this chapter could be calculated from the GPA data, so information about the early nineties is limited, but presented wherever possible.

There are two types of questions used to assess HIV/AIDS-related knowledge: open-ended questions coding respondents' spontaneous answers; and probed questions asking about a specific topic recording discrete answers (i.e. yes or no, agree or disagree, etc.). This chapter explores trends in HIV/AIDS-related knowledge indicators gathered using both techniques.

Knowledge of AIDS

Even as early as the 1989 GPA survey, virtually everyone had heard of AIDS (97% women, 98% men). Only 1% of women and none of the men in the 1996 UDHS had not. By the time the 2001 UDHS was fielded, every single respondent (female and male) between the ages of 15 and 24 had heard of AIDS. Data presenting AIDS-awareness indicators are presented by background characteristics in Appendix A, Table A.3.1 and Appendix B, Table B.3.1.

Some sections in this chapter describe respondents' knowledge of more specific HIV transmission routes and prevention methods. The few respondents in the 1996 UDHS who said they had not heard of AIDS were not asked about these topics. For the purposes of this analysis, they were assumed not to have correct knowledge.

Knows someone who is living with HIV/AIDS or who has died of AIDS

About half of the 15-24 year old women and men who participated in the 1989 GPA survey knew someone with HIV or who had died of AIDS (50% women, 55%men). When the GPA survey was repeated in 1995, 60% of young women and 57% of young men knew someone with HIV.

The 1996 UDHS recorded higher levels of knowledge than did the sub-national GPA conducted that same year. About 85% of young women and 90% of young men responding to the UDHS that year knew someone with HIV/AIDS. At the end of the decade, about nine out of 10 respondents personally knew someone living with HIV/AIDS or who had died of AIDS (89 % women, 89% men). Respondents in the 20-24 year age group, urban respondents, and respondents with at least some secondary school education were more likely to know someone.

Correct knowledge of HIV transmission

In order to assess knowledge of HIV transmission, respondents were asked questions related to HIV infection. These questions were probed, requiring discrete responses (e.g. yes or no). In this analysis we focus on three key points: that a healthy-looking person can be infected with HIV, that HIV can be passed on from mother to child, and that HIV infection can be prevented by using condoms. Data regarding prompted knowledge of HIV transmission are presented by background characteristics in Table A.3.2 and B.3.2 in Appendices A and B.

Increases in knowledge that HIV is sexually transmitted

One study conducted baseline and follow-up interviews with adolescents between 13 and 19 years of age in the rural Rakai district of Uganda. In 1990, about 64% of the young men and 82% of the young women interviewed knew that HIV can be transmitted sexually. In just two years, knowledge of this form of HIV transmission increased to 94% among both young men and women in this district (Konde-Lule et al., 1997).

Among 1989 GPA respondents, 47% of the women and 55% of the men knew that a person could be infected with HIV yet display no signs or symptoms. The percentage of people that responded correctly when asked about the healthy carrier concept during the 1995 GPA remained about the same among women, but declined to 46% among men.

The UDHS recorded higher levels of knowledge regarding the healthy carrier concept in 1995; 82% of women and 86% of men knew that a healthy-looking person might be infected with HIV. By the 2001 UDHS, these figures had declined a bit to 76% of women and 83% of men. The declines among women in the latter part of the decade were driven by

declines among the older (20-24) age group and rural women. Among men, there were no differences in patterns of knowledge by age group, residence or educational attainment.

The percentage of respondents that knew about maternal-to-child transmission was high in the early nineties and remained stable throughout the decade. During the 1989 GPA, 82% of women and 90% of male respondents answered correctly when asked if HIV could be passed from mother to child. This question was not asked again during the 1995 GPA. During the 1996 UDHS, 85% of young women and men knew that HIV could be transmitted from mother to child while 83% knew this in 2000. These national figures mask different trends by sub groups, however. Knowledge of this infection route increased among urban women but was balanced by a decline among rural women. In contrast, there was little change among rural men and declines in knowledge among men in urban areas. Women and men with a secondary education or higher were more knowledgeable in 2000 than in 1995, while their less educated counterparts were less knowledgeable in 2000 than five years earlier. Among women with no schooling, there was an 11-point decline in the percentage who knew HIV can be transmitted from mother to child.

Despite the declines, knowledge of HIV transmission was relatively high at the end of the decade. On average, three out of four young women and 83% of young men know that a healthy-looking person can be infected with HIV. Similarly, 83% of young women and men know that HIV can be transmitted from mother to child.

In the late nineties, the percentage of young women that knew HIV can be prevented by using condoms also declined by 6 percentage points, from 74% to 68%. Although the levels of knowledge varied according to the age, residence, and education of the women, the trend did not. Knowledge declined among women of all backgrounds. Among men, there was a 6 percentage point increase in the percent that knew condoms were protective and the trends did not vary by residence or education. The increase was more substantial among 15-19 year old men compared with 20-24 year olds, among whom there was no difference between 1995 and 2000. At the end of the decade, about four out of five young men had correct knowledge about condoms.

Can volunteer one way of protecting against HIV

Respondents in the 1995 and 2000 surveys were asked to spontaneously mention what a person could do to avoid HIV infection. Table A.3.3 in Appendix A presents spontaneous responses to this question by background characteristics. Those who, in response to a previous question, said there was nothing a person can do were assumed not to have correct knowledge. For the purposes of this analysis we focused on the responses related to the three key messages of the ABC model of HIV prevention – abstinence, being faithful to only one sex partner (although limiting the number of sex partners is also considered) and condom use.

As seen in Figures 3.1.a and 3.1.b, most young people know how to protect themselves against HIV infection. In 1995, 83% of women and 87% of men volunteered at least one of these key HIV prevention methods. Even with these high levels of knowledge, slight increases were seen in the late nineties, especially among young men. By 2000, 86% of young women and 93% of young men volunteered at least one correct way of protecting against HIV infection. In both surveys, urban residents were more knowledgeable than rural residents, and respondents' knowledge increased with education. In 1995, there was no difference in knowledge by age group; but in 2000, older respondents (aged 20-24) were slightly more knowledgeable than younger ones (15-19).

The methods most frequently volunteered by young people for HIV/AIDS prevention, however, differed between 1995 and 2000. In 1995, both young women and men were most likely to mention being faithful to one partner or limiting the number of sex partners as a method of HIV/AIDS prevention, cited by 58% of young women and 49% of young men (Figures 3.2.a and 3.2.b). This was followed by abstinence cited by 35% of women and 44% of men (Figures 3.3.a and 3.3.b). In 1995, of the three methods considered, the least volunteered method was condoms. At the time, only 24% of young women and 40% of men volunteered condom use as a way to prevent HIV infection.

Figure 3.1.a. Can volunteer one correct way of protecting against HIV, women.

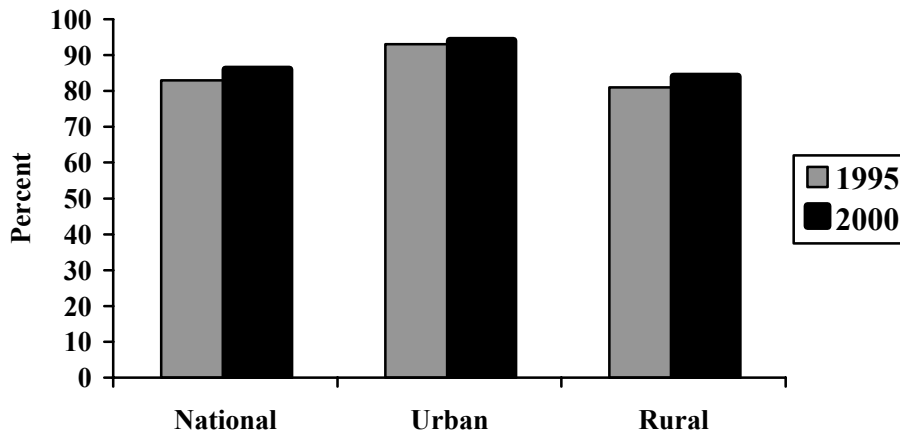


Figure 3.1.b. Can volunteer one correct way of protecting against HIV, men.

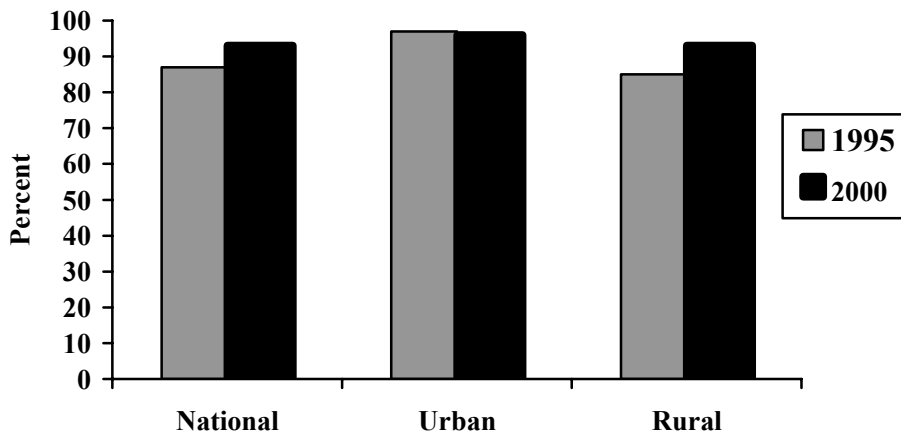


Figure 3.2.a. Spontaneously mentions having one or limiting the number of sexual partners as a way to prevent HIV infection, women.

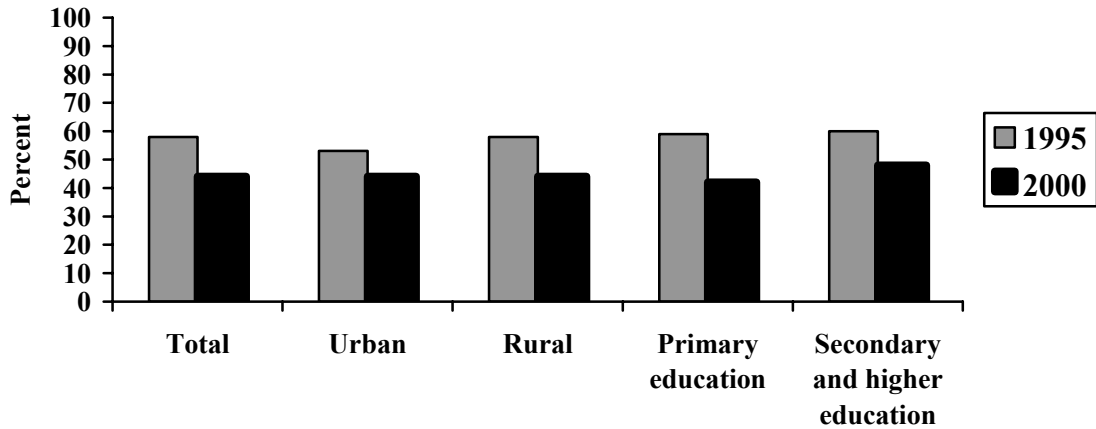


Figure 3.2.b. Spontaneously mentions limiting the number of sex partners as a way to prevent HIV infection, men.

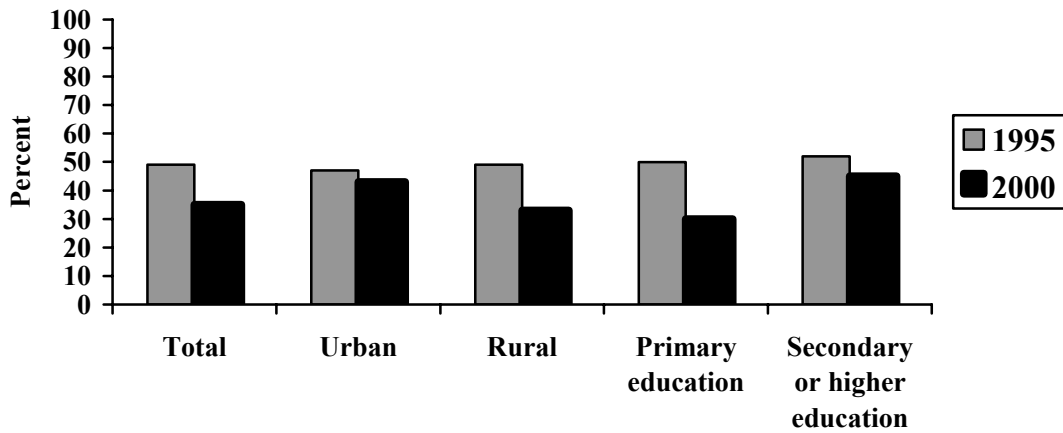


Figure 3.3.a. Spontaneously mentions abstinence as a way to prevent HIV infection, women.

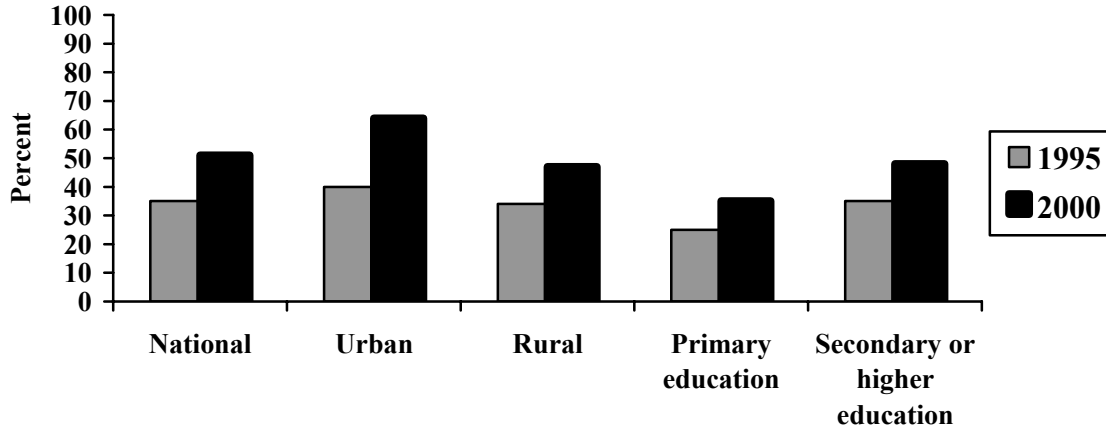
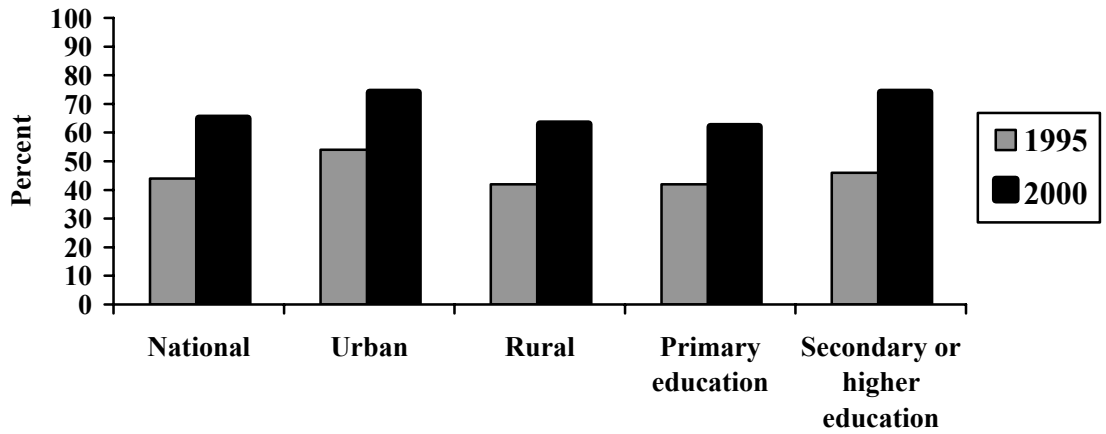


Figure 3.3.b. Spontaneously mentions abstinence as a way to prevent HIV infection, men.



By 2000, condoms became the most commonly cited response followed by abstinence. The percentage of young women who mentioned condoms more than doubled to 59%, while the percentage of young men who mentioned condoms almost doubled to 78% (Figures 3.4.a and 3.4.b). The percentages of young women and men who spontaneously mentioned abstinence also increased markedly in the late nineties to 51% and 65% of women and men, respectively. While the percentage of respondents mentioning condom use and abstinence increased, the percentages of women and men who mentioned being faithful to one partner or limiting the number of sex partners as ways to prevent HIV/AIDS declined to 44% among women and 35% among men.

Figure 3.4.a. Spontaneously mentions condoms as a way to prevent HIV infection, women.

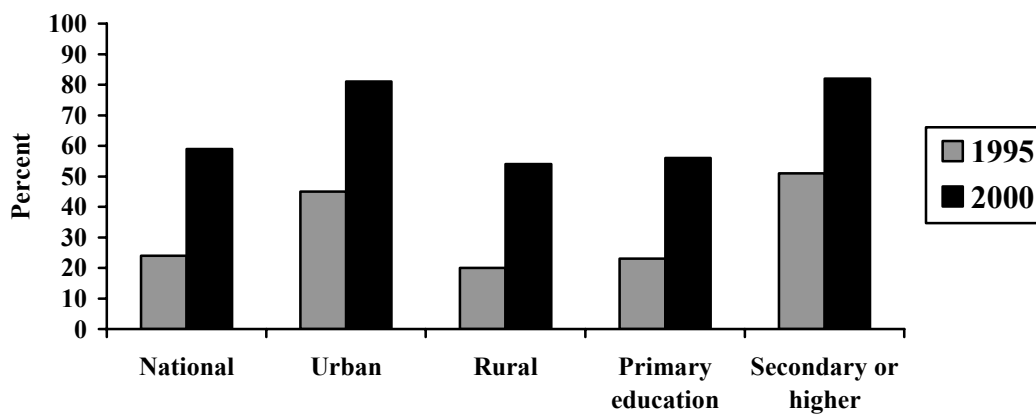
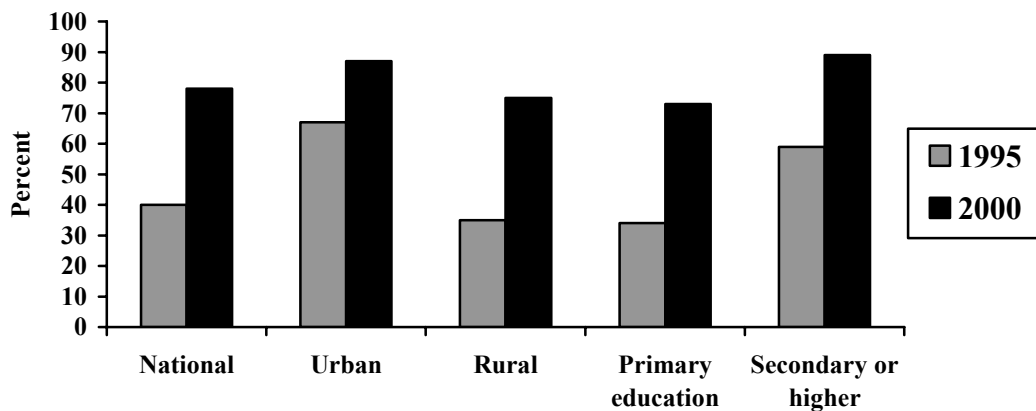


Figure 3.4.b. Spontaneously mentions condoms as a way to prevent HIV infection, men.



One problem with gauging knowledge via spontaneous responses to open-ended questions is that changes in responses may reflect changes in the attitudes of respondents toward certain methods rather than changes in knowledge of these methods. In any case, these spontaneous responses give us some insight into which methods young people are likely to consider when choosing protective behaviors.

Awareness of condoms and knowledge of condom sources

In 1989, about one half of the young women and two-thirds of the young men who participated in the GPA had heard of condoms. Awareness increased sharply in the early nineties, reaching 89% of women and 96% of men who participated in the 1995 GPA. The UDHS provide evidence that nationally awareness of condoms continued to rise throughout the late nineties. Between the 1996 and 2001 surveys, awareness of condoms increased from 77% to 86% among women and from 85% to 96% among men. By the end of the decade, most people were aware of condoms.

Perhaps more important than knowing about condoms is knowing where to purchase them. Although knowledge of condom sources increased sharply in the early nineties, in each of the surveys it lagged behind awareness. Most young GPA respondents had heard of condoms; however, less than half of them knew where to obtain one. In 1989 for example, 12% and 33% of young women and men respectively knew where to obtain a condom. This increased to 29% and 50% of young women and men in 1995 and reached 57% of young women and 81% of men by 2000. The gap between awareness of condoms as a prevention method and knowledge of where to obtain a condom narrowed during the late nineties. However, at the end of the decade knowledge of condom sources lagged behind awareness, especially among young women.

For young people to protect themselves against HIV infection, they not only need to know which behaviors are protective but also need to be equipped with the knowledge of how to adopt the behaviors. If young people do not know where to obtain a condom, they cannot be expected to use them correctly and consistently.

Risk perceptions

Despite widespread knowledge of HIV/AIDS, few young people feel they are personally at risk. During the 1989 GPA, 51% of young women and 57% of young men felt there was either a moderate or good chance that they could be infected with HIV. This declined to 42% and 41% of women and men, respectively during the 1995 GPA. The 1996 UDHS was the only survey that asked about risk perception. At that time, 28% of young women and only 16% of young men said they felt they were at moderate or high risk of becoming infected, much lower than the GPA of the same year. Even among young people who had engaged in unprotected sex with a non-marital partner, only 39% of young women and 32% of young men felt they were at risk. Risk perception data are presented in Tables A.3.4 of Appendix A and Table B.3.3 of Appendix B.

Virtually everyone in Uganda has heard of AIDS and most young people know someone with HIV or who has died of AIDS. Yet, most young people feel they are at little or no risk of HIV infection (Figures 3.5.a and 3.5.b). This presents a hurdle for behavior modification efforts targeting young people. Knowledge of AIDS and AIDS prevention does not seem to be a big enough motivator for behavior change. Most young people know about AIDS and how to avoid it, but may have little incentive to adopt protective behaviors if they feel they are not at risk of becoming infected. The level of risk perception among youth should be taken into account when reading the following chapters, which present data on the sexual behavior patterns of young people.

Figure 3.5.a. Perceived risk of AIDS by age group, women (1995).

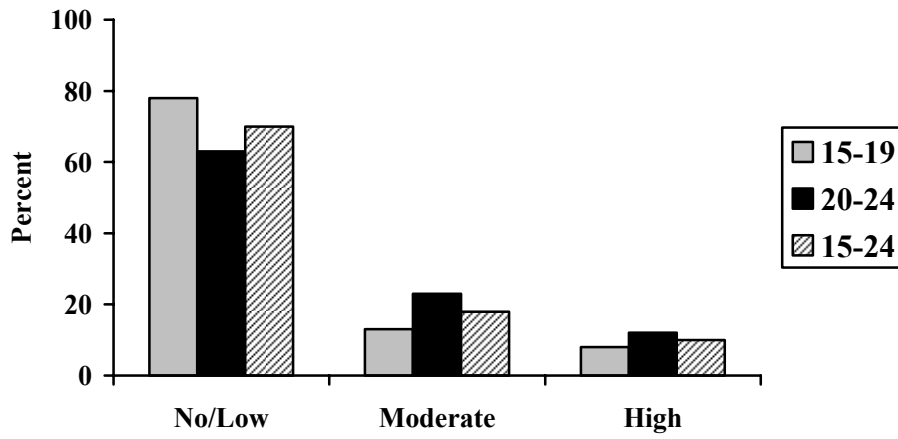
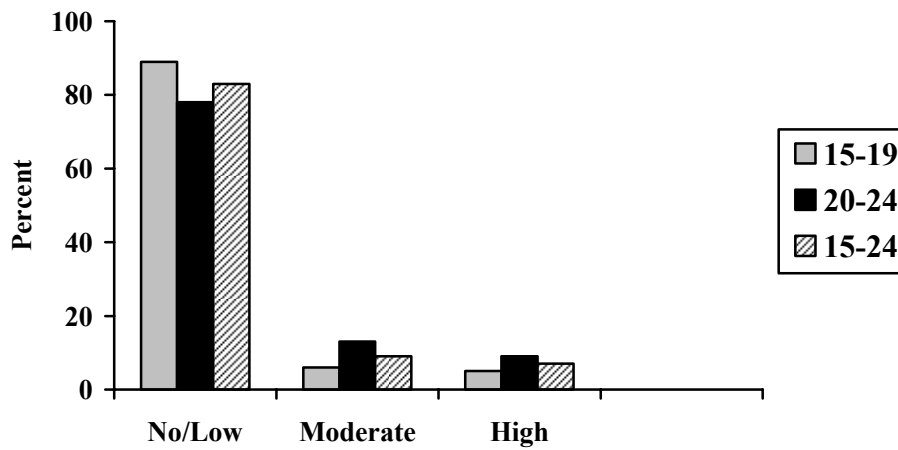


Figure 3.5.b. Perceived risk of AIDS by age group, men (1995).



4. SEXUAL DEBUT AND AGE AT FIRST MARRIAGE

Many AIDS prevention programs promote abstinence and delayed sexual debut among young people as a way of preventing the spread of HIV. Early sexual debut increases the number of years of exposure to the risk of HIV. Furthermore, the earlier teenagers become sexually active, the more likely they are to have multiple partners, and every additional sex partner increases the chances of encountering an HIV-infected partner. One of the most encouraging findings is that young people are choosing not to have sex. Data from the UDHS regarding early sexual debut, age at first sex, and age at first marriage are presented in Table A.4.1 of Appendix A.

Premarital sex

Data from the UDHS suggest a decline in premarital sex in the early nineties (Figures 4.1.a and 4.1.b). The percent of single women aged 15-24 who had sex the previous year was 36% in 1989, and this figure declined to 22% by 1995. Data for the late nineties suggest that some of the declines in premarital sex of the early nineties were reversed among young women between 1995 and 2000. The percentage of young single women who reported premarital sex in the previous year was 27% in 2000 – a slight increase from 1995. By age group, most of the declines of the early nineties among 20-24 year old women were eroded by the end of the decade. In 2000, single women aged 20-24 were about as likely to report premarital sex as those aged 20-24 in 1989. While there was a small increase in premarital sex among younger women (aged 15-19) after 1995, these younger women at the end of the nineties were less likely to engage in premarital sex than single younger women were at the end of the eighties.

Among women with a primary education, the declines in the early nineties were more subtle, but also more permanent. This was the only group that sustained the declines in premarital sex experienced during the early nineties through the end of the decade. The trends among women with no schooling and those with secondary education mirrored the national trend: declines in the early nineties followed by a relatively small increase in the late nineties. While premarital sex is more common among urban than rural young women, the trends are similar in both areas.

In the late nineties, UDHS data indicate virtually no change nationally in the percent of single young men who reported having premarital sex in the past year. Men in the 20-24 age group were more likely than teenagers to report premarital sex, but the trends did not differ by age group. However, the national figures mask differing subnational trends by type of place of residence and education level. In urban areas, there was virtually no change in the late nineties, but, among rural young men, there was a slight decline in premarital sex during the second half of the decade. Like women, in the late nineties young men with primary education experience the greatest decline in reported premarital sex. In 1995, 34% of young men with a primary education reported having premarital sex and this dropped to 27% by 2000. The reverse was true for young men with a secondary education, among whom the percentage reporting premarital sex in the previous year increased from 33% to 39% between 1995 and 2000.

Figure 4.1.a. Premarital sex: Percent of single 15-24 year old women who had sex the previous year.

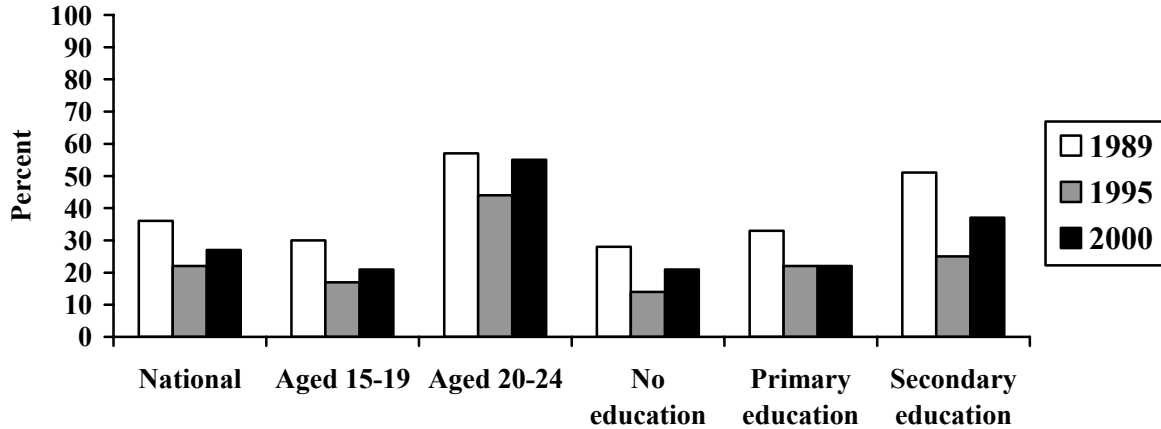
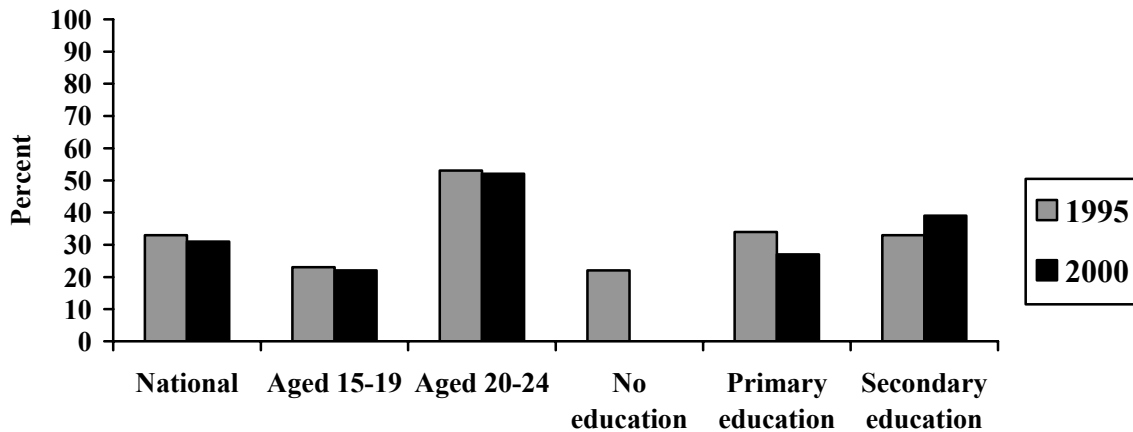


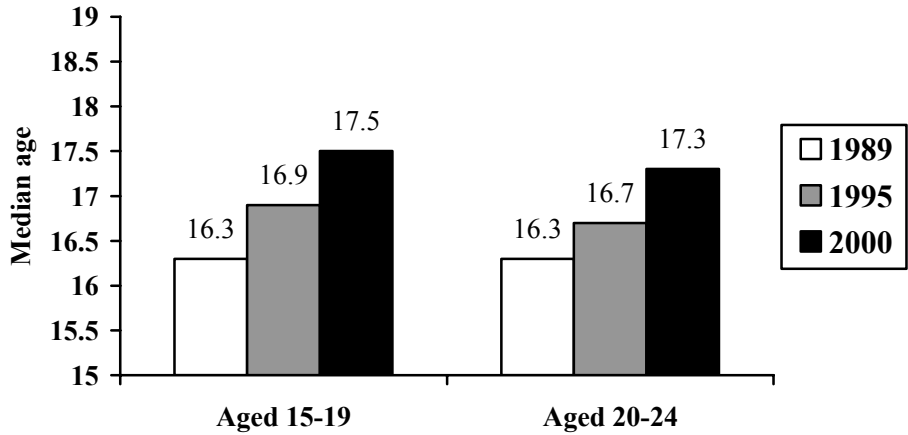
Figure 4.1.b. Premarital sex: Percent of single 15-24 year old men who had sex the previous year.



Age at first sex

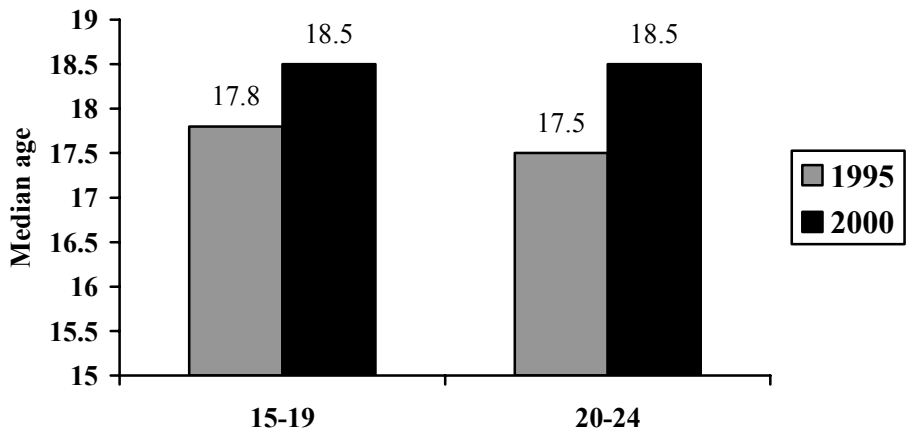
The decline in the percentages of young people who report having premarital sex is encouraging. Another measure of abstinence is whether young people are delaying sexual debut. If they are, there should be a corresponding increase in the median age at first sex, that is the age by which 50% of young people have had penetrative sex. The changes in this indicator are also encouraging. As seen in Figure 4.2.a, between 1989 and 2000, the age by which one-half of women aged 15-19 at the time of the survey had had sex increased from 16.3 to 17.5 years. Among the older group of women (20-24) the median age at first sex increased from 16.3 to 17.3.

Figure 4.2.a. Median age at first sex by age group at the time of the survey, women.



A slightly larger increase in median age at first sex is seen among men based on current status data from the 1995 and 2000 surveys. In 2000, younger men (aged 15-19) reported that, on average, their first sexual experience took place at age 18.5; up from 17.8 reported by men aged 15-19 in 1995. Among men aged 20-24 at the time of the survey, the median age at first sex increased by a full year from 17.5 to 18.5 between 1995 and 2000 (Figure 4.2.b).

Figure 4.2.b. Median age at first sex by age group at the time of the survey, men.



More evidence of delayed sexual debut among boys and delayed marriage among girls

One study in rural Uganda found evidence of delayed sexual debut among young men between the ages of 13 and 19. The average reported age at first sex rose from 17.5 to 18.2 between 1992 and 1996. In the same time period, the average age at marriage among young women increased by a full year from 18.5 to 19.5. (Kamali et al., 2000)

The estimates of median age at first sex are based on the current virginity status of young people. Life tables that make use of this current status data along with data on reported age at first sex among those already sexually active can provide a more robust estimate of changes in median age at first sex (Zaba et al., 2002). Since this methodology also makes use of retrospective data, they allow for an estimate of change in median age at first sex among men throughout the nineties, even though survey data were not available on men until 1995. The median age at first sex is adjusted for bias in reporting. This analysis showed that there was about a one year delay in age of sexual debut for both men and women over the course of the decade.

Sexual debut before age 15

The trends in this indicator provide more evidence that young women and men are delaying sexual debut. The percentage of young women who reported having had sex before their 15th birthday declined, particularly in the most recent survey (Figure 4.3.a). Since this indicator refers to behavior that occurred up to nine years prior to the survey, it allows us to examine youth behavior as early as the mid-eighties. It seems that the decline in premarital sex began in the late 1980s. During the 1989 survey, about 31% of the women aged 20-24 years old reported having sex by age 15. By 1995, 27% of the 20- to 24-year-old women reported early sexual debut and this reached 21% by 2000. Because the women who were aged 20-24 at the time of the 1995 survey turned 15 between 1986 and 1990, these declines reflect changes that occurred in the mid- to late eighties. Of the young women aged 15 to 19 at the time of the 2001 UDHS, only 14% reported having had sex by age 15. Compared to women aged 15-19 in 1995, this is about a 50% decline.

Women's level of education is strongly associated with early sexual debut. Among those with no education, 30% of the respondents in the 2001 UDHS reported sex by their 15th birthday whereas only 19% of those with primary education experienced early sexual debut. During each survey, women with secondary school were the least likely to report early sexual debut. These women were less than half as likely as those in primary school and three to four times as likely as women with no education to have had sex before age 15. Among young women, the relationship between education, early sexual debut, and marriage is complex and the causality cannot be determined from these data.

Significant reductions in early sexual debut were evident among men as well. In 1995, 19% of 15-24 year old men reported sex by age 15 whereas only 13% did so in 2000 (Figure 4.3.b). Among men, there was not much difference by education level in the percentages that experienced early sexual debut.

Figure 4.3.a. Early sexual debut: Percentage of 15-24 year old women who had sex by age 15.

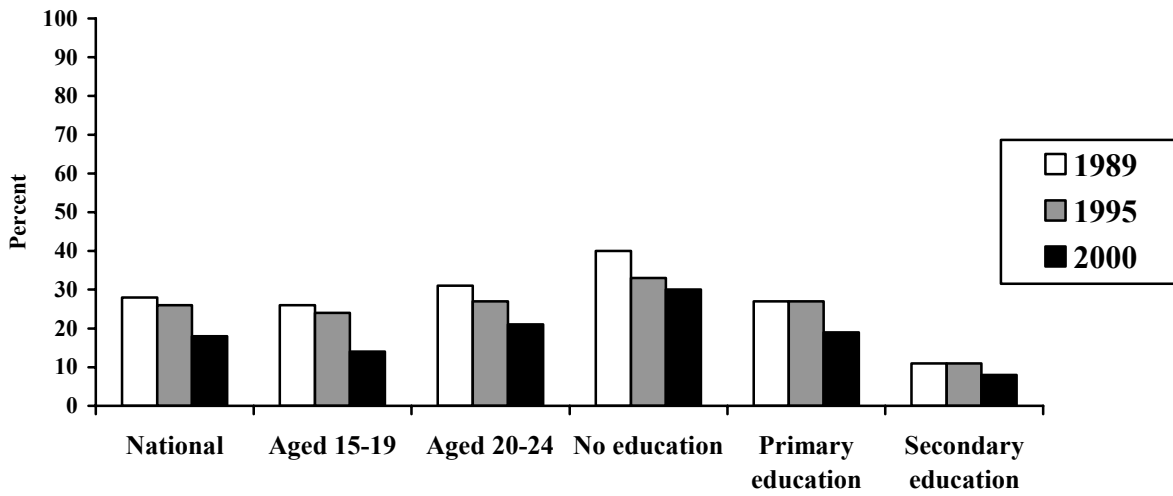
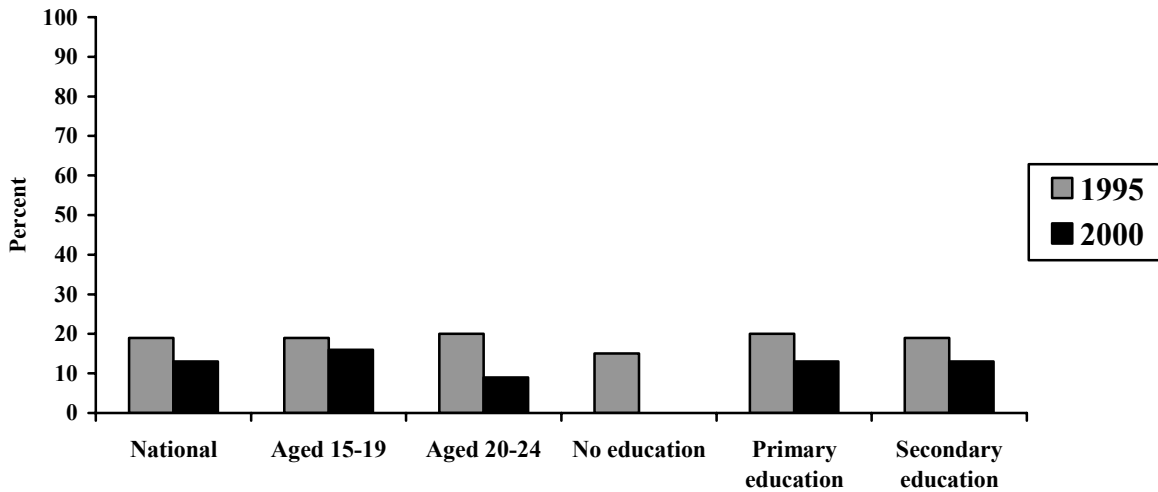


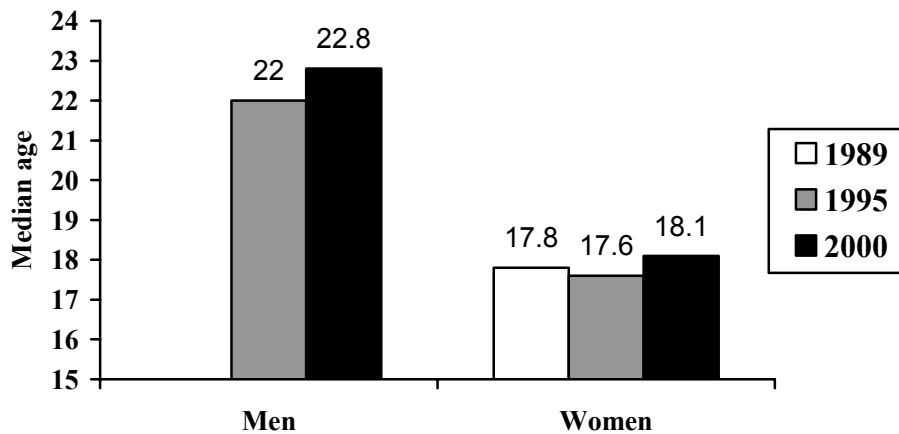
Figure 4.3.b. Early sexual debut: Percentage of 15-24 year old men who had sex by age 15



Age at first marriage

On average, men marry more than four years later than women do and it seems they are delaying marriage even further. Between 1995 and 2000, the average age at first marriage among men increased from 22 to 22.8, while among women it increased modestly from 17.8 to 18.1, after a slight decline in the mid-nineties (Figure 4.4).

Figure 4.4. Median age at first marriage.



Because the age at first sex and age at first marriage have both increased for men, there remains a significant period of time when young men are having sex outside of marriage, about four years on average. This is likely to result in a larger number of lifetime sexual partners, either through multiple concurrent partners or through serial monogamy, and thus to an increased risk of HIV infection. Young women, on the other hand, are delaying sexual activity to an age when many get married and are less likely to have non-regular partnerships (Figures 4.5.a and 4.5.b). Although the percentage of women engaging in high risk behavior is low, they remain at risk for HIV infection because they are likely to marry men who engaged in higher risk sexual activity for a significant period of time before the marriage.

Fig 4.5.a. Proportion sexually active and married by age, women.

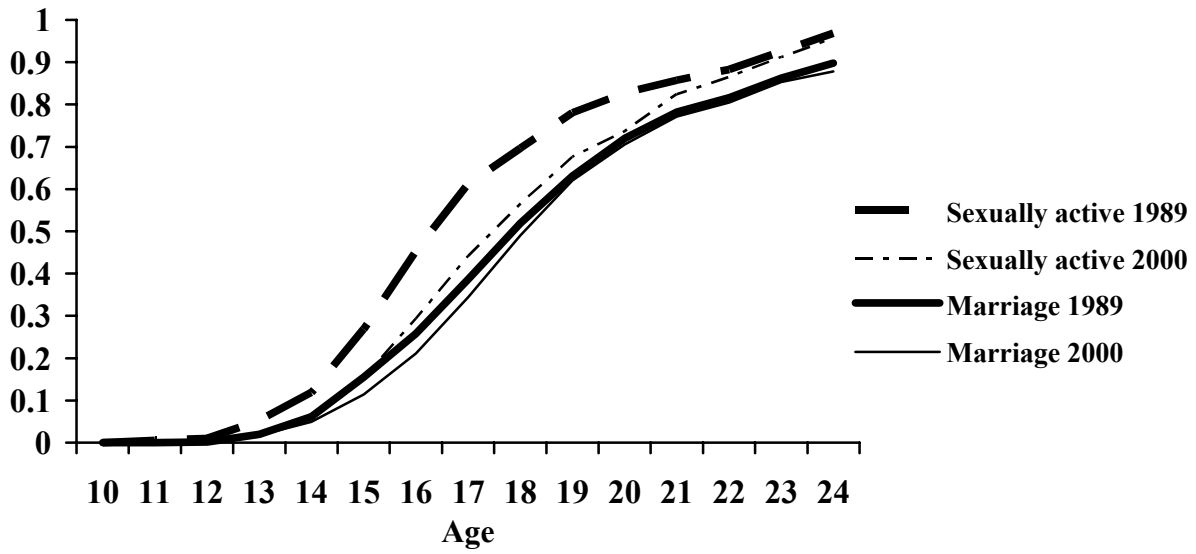
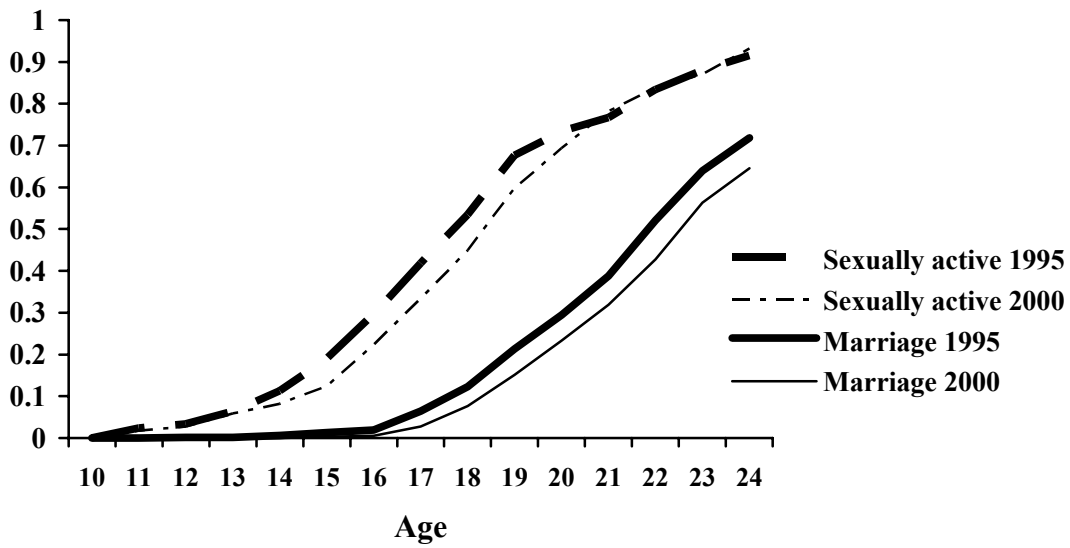


Fig 4.5.b. Proportion sexually active and married by age, men.



5. SEXUAL BEHAVIOR

Besides sexual debut and age at marriage, more recent sexual behavior patterns of young people were examined by looking at such sexual practices as recent abstinence, non-marital and multiple partnerships, and extramarital sex. A short and finite reference period allows the calculation of indicators that are more sensitive to changes in behavior. The data sets allowed for the calculation of abstinence, non-regular, and extramarital sex indicators using one-year reference periods. However, for multiple partnerships, the 1996 UDHS questions were asked in reference to the six months prior to the survey, while in 2000, the reference period was one year. This difference in the recall period may have affected the comparability of the results. All the data sets allowed for the calculation of the sexual activity and extramarital sex indicators using one-year reference periods. The data for these indicators are presented by background characteristics in Table A.5.1 of Appendix A for the UDHS and Table B.5.1 of Appendix B for the GPA.

Abstinence

There is evidence of a trend towards abstinence among young Ugandans. In the year preceding the 1989 UDHS, about one-quarter (27%) of young women had abstained from sex. By 2000, about one-third of young women were abstinent (Figure 5.1.a). The percentage of 15-19 year old girls who chose abstinence increased much more sharply in the late nineties compared with the early nineties. This is in contrast to the behavior patterns of women aged 20-24, among whom abstinence rates peaked in the mid-nineties and by 2000 had declined to about the same levels as in 1989 (Table A.5.1). It seems that urban young women are driving much of the trend. In urban areas, the percentage of women who were abstinent in the previous year rose sharply between 1989 and 1995, from 26% to 38%, and then leveled off; whereas among rural young women, the gains were steady but smaller. Young women with secondary education also experienced sharp increases, particularly in the early nineties. Although the trend among women with secondary education has reversed a bit, they were much more likely to abstain from sex in 2000 than in 1989.

The GPA data also provide evidence of increases in abstinence rates in the early nineties. They show that abstinence rates among young women doubled in the early nineties from 19% in 1989 to 38% in 1995. During the same period, the GPA data show increases in male abstinence rates. Among young men, one-year abstinence rates increased from 30% in 1989 to 51% in 1995, driven mostly by changes among teenagers (aged 15-19) and urban youth.

Among men, abstinence rates continued to rise throughout the end of the decade (Figure 5.1b). According to the 1996 UDHS, in 1995 almost one-half (47%) of young men reported abstaining from sex in the previous year. By 2000, this increased somewhat to 53%. As seen in Figure 5.1.b, the overall increase among men in the late nineties was driven by higher abstinence rates among rural rather than urban men.

Figure 5.1.a. Abstinence: Percent who did not have sex in the past year, women.

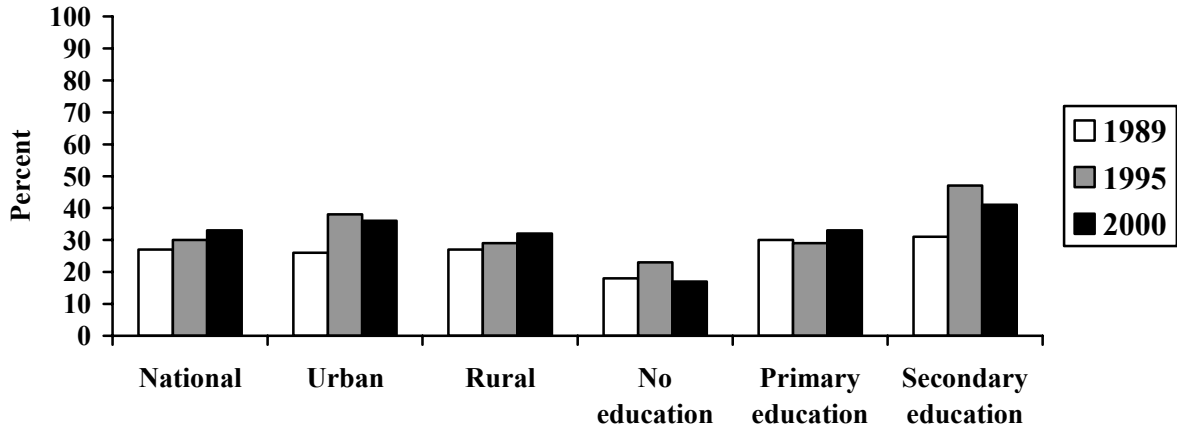
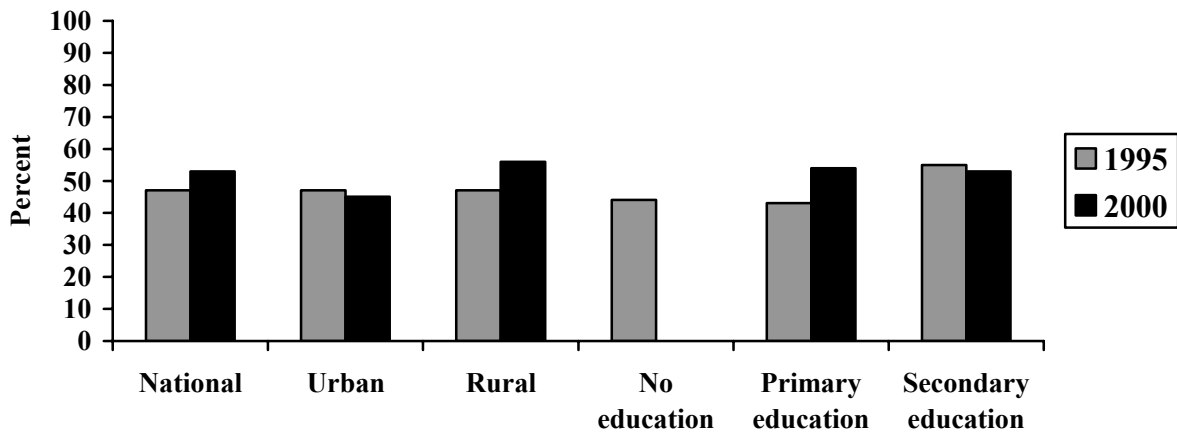


Figure 5.1.b. Abstinence: Percent who did not have sex in the past year, men.



Secondary abstinence

The indicator presented above includes all respondents in the denominator, regardless of whether they have ever had sex. Data presented earlier suggest that some of the increases in abstinence rates are as a result of delayed sexual debut. However, secondary abstinence, that is, abstinence among people who have already initiated sex, also contributes to the observed increase in abstinence rates.

Table A.5.1, Appendix A presents UDHS data on trends in secondary abstinence rates among single respondents, who are probably more likely than married people to practice secondary abstinence. Among young, single women, secondary abstinence rates increased sharply in the early nineties, from 18% in 1989 to 31% in 1995. However, by 2000 the rates declined a bit to 27% (Figure 5.2.a). The trend was similar for most subgroups, although secondary abstinence rates continued on a subtle upward trend among 15-19 year olds in the late nineties. Among young women with a primary education, the increase in secondary abstinence observed in the early nineties was much smaller than that observed among other subgroup; however, they were much more likely than young women in other groups to maintain the higher abstinence rates.

Overall, there was a small decline in secondary abstinence rates among men. This was driven mostly by declines among 15-19 year olds, urban men, and those with a secondary education (Figure 5.2.b). Among these groups, secondary abstinence rates declined by seven to 10 percentage points, whereas there was either no change or a slight increase in abstinence rates among men aged 20-24, rural men, and men with a primary education. Trend data on secondary abstinence are not available from the GPA surveys.

Figure 5.2.a. Secondary abstinence: Percent of single, sexually-experienced 15-24 year olds who abstained from sex in the past year, women.

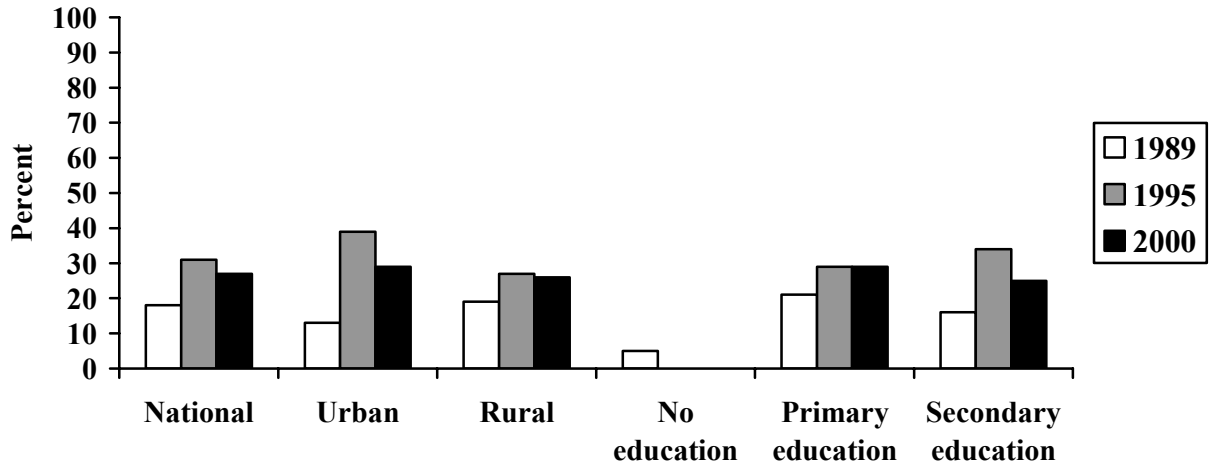
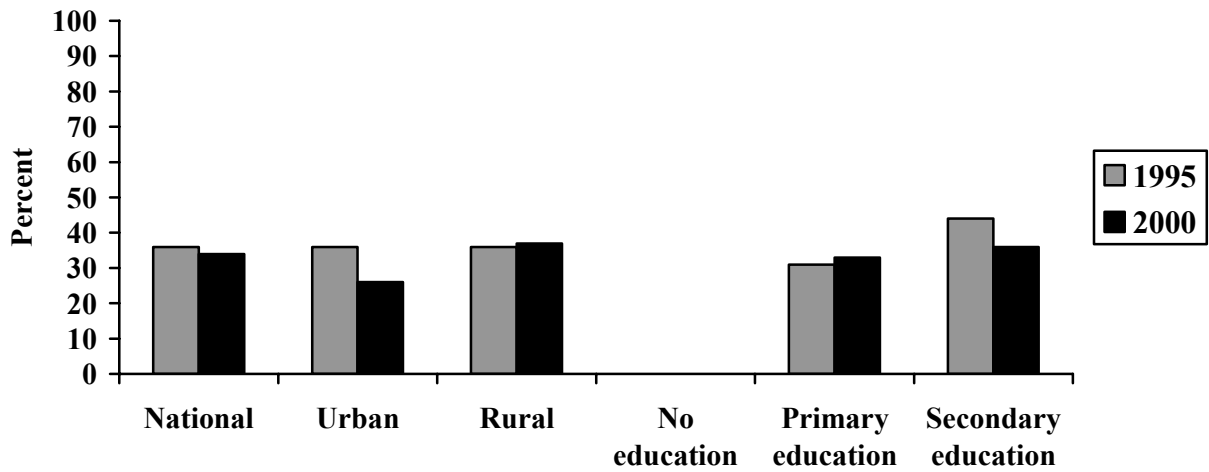


Figure 5.2.b. Secondary abstinence: Percent of single, sexually experienced 15-24 year olds who abstained from sex in the past year, men.



Non-marital partnerships

Key messages targeting youth in Uganda encouraged young people to abstain from sex until marriage and then remain faithful to one partner. Tracking the percentage of young people that report sexual activity with a non-regular (i.e. non-marital, non-cohabiting) sex partner provides an idea of whether young people are adopting these behaviors. This indicator captures all sex among non-married respondents as well as extramarital sex among married and cohabiting respondents. Data on non-regular partnerships are available by background characteristics in Table A.5.2 of Appendix A for the UDHS and Table B.5.2 of Appendix B for the GPA.

Data from the GPA suggest that there was a decline in non-regular partnerships in the early nineties. In 1989, 32% and 71% of young women and men, respectively, reported sex with a non-regular partner in the past year. By the mid-nineties, fewer young respondents reported this behavior. In 1995, only 13% of women and 29% of men said they had had sex with a non-marital partner in the previous year (Table B.5.2).

Data from the UDHS suggest that the national levels of non-regular partnerships may have been a bit higher in the mid-nineties than the GPA survey suggests, and that the declining trend leveled off sometime after 1995. In the 1996 and 2001 UDHS, about one-quarter of the sexually active young women reported at least one non-regular partner (25% in 1995, 22% in 2000). Sexually active young men, on the other hand, were much more likely than women to have had sex with a non-marital, non-cohabiting partner. About 55% of sexually active men reported having sex with at least one non regular partner in 1995, and this did not change much during the next five years.

Although nationally there was not much change in the late nineties in the percentage of young people reporting non-regular partnerships, there were changes among some subgroups of young men. Between 1995 and 2000, increases in non-regular partnerships were experienced by teenage boys (aged 15-19), urban young men, and young men with some secondary education or higher. In 2000, about 81% of men aged 15-19 reported at least one non-regular partner; and this was much higher than the 64% who reported this behavior in 1995. Non-regular partnerships among urban young men increased from 73% in 1995 to 80% in 2000. Among men with some secondary education, two-thirds reported non-regular partnerships in 1995, while about three-quarters reported this behavior in 2000.

Extramarital sex

This section looks more specifically at married men and women to assess faithfulness to one's partner within marriage. Overall, married women were less likely than men to report extramarital sex. Only 3% of young, married women in each UDHS (1996 and 2001) reported having a non-marital sex partner. Compared with the UDHS, the GPA surveys recorded slightly higher rates of extramarital sex among young women (8% in 1989 and 7% in 1995).

Although young, married men were more likely to do so, the practice seems to be on the decline. During the 1989 GPA, about one in four men (26%) reported extramarital sex the previous year, and this declined to about 16% in 1995 (Table B.5.2). The nationally representative UDHS recorded slightly higher levels in 1995 (27%), and this declined to 16% in 2000 (Table A.5.2).

Multiple partnerships

The GPA surveys documented large declines in multiple partnerships among sexually active, single youth in the early nineties. The percentage of single, sexually active respondents who reported this behavior dropped from 24% to 18% among women and from 55% to 29% among men between 1989 and 1995. This was driven mostly by declines in rural areas among both women and men.

Reduction in multiple partnerships among young women

In rural Rakai district, the proportion of women between 15 and 19 years of age who reported two or more partnerships declined from about 13% to 6% between 1990 and 1992 (Konde-Lule et al., 1997).

The UDHS data suggest that the declining trend in multiple partnership rates continued throughout the late nineties. About 11% of sexually active single women reported more than one non-regular partner within the previous six months in the 1996 UDHS, and this behavior declined to 5% of women in 2000.³ These declines were driven mostly by declines among 20- to 24-year-old women, rural women, and women with primary education.

During the 1996 UDHS, a little less than one in five sexually active single young men reported two or more sex partners in the year preceding the survey. Nationally, there was little change in this indicator in the five years that followed, although this masks opposing trends by type of place of residence. In the late 1990s, multiple partnership rates declined slightly among rural men, while they increased slightly among urban men. As a result, in the late nineties, the urban rural gap in multiple partnership rates widened among young single men.

³ The reference period differed between surveys. In 1995, the UDHS asked about behaviors in the past six months, while in 2000 the UDHS referred to the previous year. Due to the shorter reference period, the 1995 figures may underestimate the percentage of respondents who had multiple partners. Thus, the declines in this indicator in the late nineties may have been larger than what these data suggest.

6. CONDOM USE

Despite efforts to encourage young people to abstain from sex or remain faithful to one partner, many young people are having premarital sex, sex with non-regular partners, and sex with multiple partners. One way to reduce the spread of HIV/AIDS among young people who engage in sexual activity, especially high-risk sexual activity, is to get them to use condoms correctly and consistently, especially during sex with non-regular partners. In addition to the indicators of sexual behavior presented in the previous chapter, an in-depth look at condom use among young people in Uganda is provided in below. All data regarding condom use are presented by background characteristics in Tables A.6.1 and B.6.1 of Appendices A and B.

Condom ever use

The methods and questions differed significantly between the GPA surveys and UDHS, making comparisons between the two kinds of surveys difficult. For example, the 1989 UDHS asked, in the context of family planning, whether respondents had ever used condoms. The 1989 GPA survey asked respondents whether they or their spouses or regular sex partners had ever used a condom, also done in the context of family planning. The 1996 GPA differed from both 1989 surveys by asking respondents whether they had ever used a condom, without reference to the reasons for use or partner type.

The estimates derived from the early GPA and UDHS surveys vary, likely due to the sampling and methodological differences previously described. However, all data sources provide evidence that in the early nineties very few young people, especially women, had ever used a condom. During the 1989 GPA, about 9% and 22% of the sexually active young women and men, respectively, reported having used a condom with a spouse or regular partner. According to the UDHS, in 1989 only one out of every 100 sexually experienced young women had ever used a condom for family planning. Despite differences in estimates, both surveys provide evidence of a trend toward increased condom use during that period. Estimates derived from the 1995 GPA data suggest that condom use increased from 9% to 26% among young sexually active women, and from 22% to 35% among sexually active young men. The phrasing of the question in the 1995 GPA may slightly overestimate condom use relative to 1989 because it includes condom use with any partner, not just regular partners. However, the UDHS also point to increasing condom use in the early nineties. In 1995, 8% of young women reported ever having used a condom for family planning, up from 1% in the 1989 UDHS.

The trend continued into the late nineties, and by 2000 almost one-quarter of young women (23%) reported having used a condom at least once (Figure 6.1.a). In 1995, 26% of sexually experienced young men had used condoms. By 2000, this increased to 55% (Figure 6.1.b).

Figure 6.1.a. Ever use of condoms among sexually active young women.

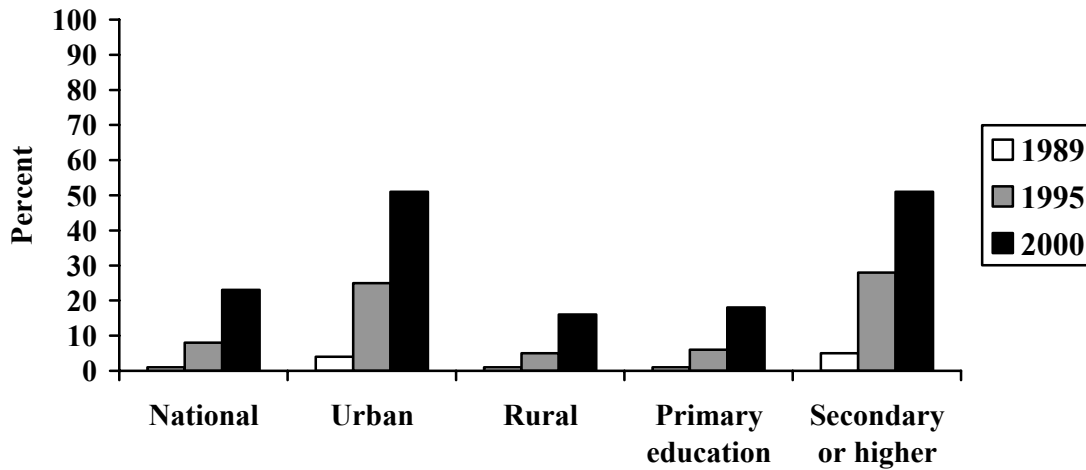
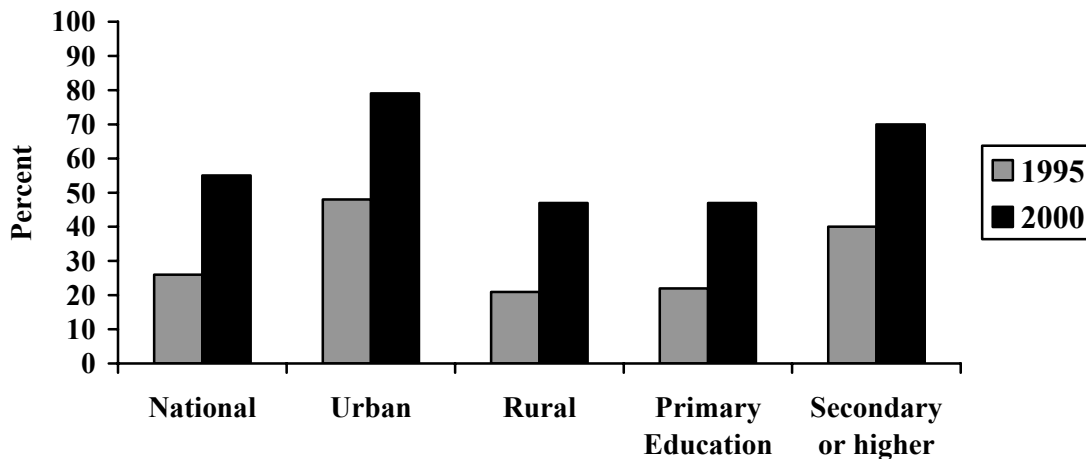


Figure 6.1.b. Ever use of condoms among sexually active young men.



There are some important differences in condom use by background characteristics. In 1989, younger respondents were more likely to have ever used condoms; however, by 1995, age differences persisted only among men. Urban women and men are much more likely than their rural counterparts to report condom use, and these urban-rural differences persisted into the late nineties. The greatest increases in condom use for family planning occurred among urban women and men, resulting in a wider urban-rural gap. At the end of the decade, urban young women were about three times as likely as rural women to have ever used a condom for family planning. Among young men, the ratio of urban-to-rural condom use for family planning was about 1:5. From these data, it is not possible to determine whether this is an issue of preference or access.

There are also striking disparities according to educational attainment, especially among women. Young women with secondary education are 10 times as likely as those with no education to have ever used a condom for family planning. In 2000, only 5% of those who had not attended school had ever used a condom. This is in contrast to young women with secondary education, of which about one-half had used condoms. Similar disparities were seen among young men with different levels of education. In both surveys, men with a secondary education or higher were

more likely than those with only some primary schooling to have used a condom, although the gap between men with primary and secondary education is narrowing.

More evidence of increased condom use

In rural Rakai district, the proportion of 15-19 year-olds who report that they have used condoms increased between 1990 and 1992. About 11% of young men and 4% of young women reported condom use in 1990. This increased to 24% of young men and 9% of young women by 1992 (Konde-Lule et al., 1997).

Another study in rural Uganda reported an increase in overall condom ever use among men and women, driven mostly by the younger age groups, aged 13-24 years (Kamali et al., 2000).

By marital status, differences in the percentage of young men and women who have ever used condoms are striking. For the most part, it is non-married young people who are using condoms, and the biggest increase in condom use throughout the decade was among this subgroup. In 2000, non-married young women were about three times as likely as their married counterparts to have ever used a condom (45% non-married, 13%

married). Non-married men were about one third more likely than married men to have ever used a condom (60% non-married versus 46% married). In 2000, 45% of non-married sexually active women said they had used a condom. This represents a very important increase from the 2% who reported condom ever use in 1989. Among non-married men, condom ever use almost doubled in the late nineties, from 33% in 1995 to 60% in 2000.

Condom use at last sex

Getting young people to try condoms is a significant accomplishment. However, one-time condom use is not enough to limit the spread of HIV/AIDS. Rather, it is the correct and consistent use of condoms that will help to curb the epidemic. Another indicator of condom use is the percentage of sexually active young people who used a condom during their last sexual encounter.⁴ Although this does not directly measure consistent condom use, it is an indicator that is sensitive to changes in consistent condom use. As condom use becomes more consistent, the likelihood that respondents would have used a condom at last sex increases, therefore this indicator should capture changes in both occasional and consistent of condom use.

As seen in Figure 6.2.a, the percent of sexually active young women who used a condom at last sex increased from 4% in 1995 to 11% in 2000. Although 11% is rather low, there are important differences among subgroups. For example, while in 1995 there was no difference in condom use by age group, by 2000, women aged 15-19 were more than twice as likely as those aged 20-24 to have used a condom at last sex (19% versus 7%, respectively). This is likely because more

⁴ Respondents were considered sexually active if their last sexual encounter took place within one year of the date of the interview.

women aged 20-24 are married, and condom use within a marriage is rare. In 1995, about one out of four sexually active non-married young women used a condom at last sex (26%); by 2000, 41% of non-married young women reported using a condom at last sex. Among married women, only 2% in each survey used a condom at last sex (Figure 6.3.a). Urban women were more than three times as likely as rural women to have used a condom at last sex. The most striking differences, however, exist among women of different education levels. In 2000, young women with some primary education were four times as likely as those with no education to have used a condom at last sex. Still, this was only 8% of sexually active young women with primary school education. However, among women with secondary education, 30% used a condom at last sex; much higher than women with less education.

Similarly, the percentage of young sexually active men who used a condom at last sex increased from 22% in 1995 to 35% in 2000 (Figure 6.2.b). Marital status, type of place of residence, and education level were all associated with condom use at last sex. For example, urban young men were more than twice as likely as rural men to have used a condom at last sex. Among men with secondary education in 2000, more than one-half (56%) reported using a condom at last sex, compared to 26% of young men with a primary education. Non-married young men are also much more likely to have used a condom at last sex than married men; 58% of sexually active non-married men reported in 2000 using a condom at last sex, compared to only 8% of married young men (Figure 6.3.b).

Figure 6.2.a. Condom use at last sex among sexually active young women.

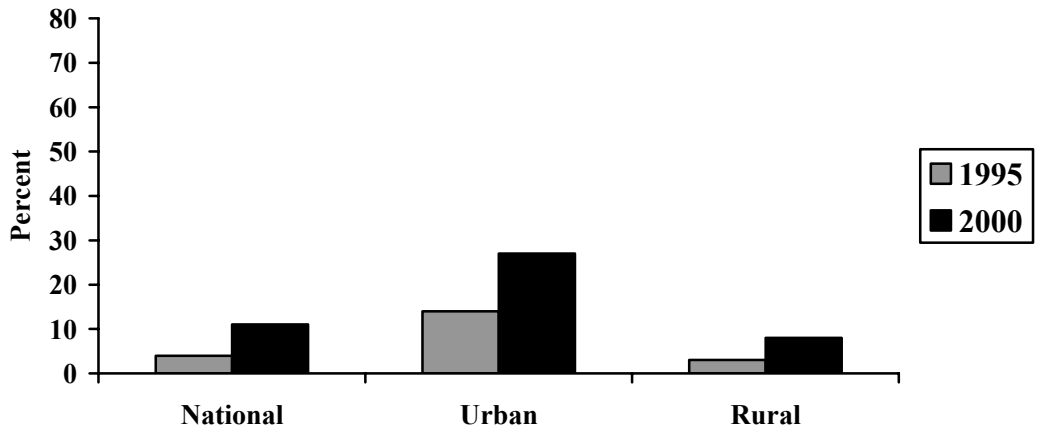


Figure 6.2.b. Condom use at last sex among sexually active young men.

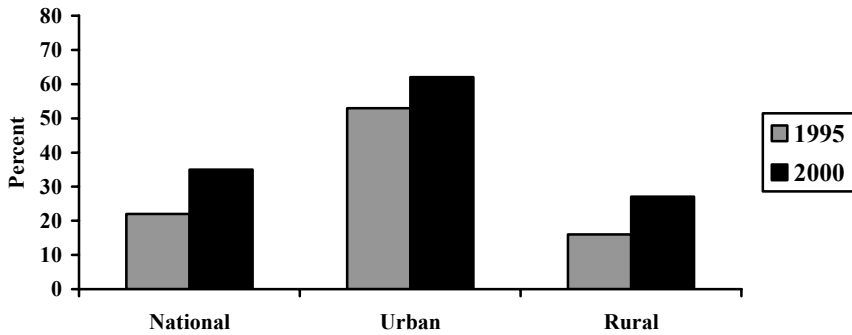


Figure 6.3.a. Condom use at last sex by marital status among sexually active young women.



Figure 6.3.b. Condom use at last sex by marital status among sexually active young men.



Condom use at last sex with a non-regular partner

Since not all sex is high risk, not all sex acts require a condom for this to be an effective method of HIV prevention. For this reason, condom use at last higher risk sex (i.e., sex with a non-regular partner) is an important focus. In 1995, of the young women and men who had at least one non-regular partner, one-quarter of the women and 40% of the men reported using a condom at last sex with these partners.⁵ By 2000, more people reported using condoms with their last non-regular partner; 44% of young women and 62% of young men with non-regular partners did so (Figures 6.4.a and 6.4.b). Although the percentage reporting this behavior increased within all subgroups, in 2000 young, urban women and men and those with some secondary education were most likely to use condoms with non-marital, non-cohabiting partners.

Trends in this indicator should be interpreted along with trends in non-regular partnership rates presented earlier. Because one of the key messages of HIV prevention campaigns is partner reduction, the denominator for the indicator presented above will fluctuate. So, it is possible that changes in this indicator are as a result of declines in the number of people reporting non-regular partners, rather than solely an increase in the number of people using condoms with these. Chapter 7 presents an index of risky sexual behavior, which addresses these issues.

This rise in condom use began during the early to mid-nineties, just as HIV prevalence was declining. Because HIV incidence likely declined in the late eighties or early nineties, when reported condom use was very low; it is unlikely that condoms contributed to the initial decline in HIV prevalence witnessed in Uganda around 1993. However, condom use continued to increase well into the late nineties, and this type of protective behavior is likely contributing to the sustained lower levels of HIV prevalence in Uganda.

Knowledge versus behavior

Compared with other protective behaviors of the ABC model, the largest shifts in both knowledge and behavior were related to condom use. Increases in condom knowledge were large and condoms shifted from being the least cited prevention method in 1995 to the most cited in 2000. However, at the end of the decade, condom use lagged behind other protective behaviors.

⁵ This indicator was calculated among respondents who said they had at least one non-regular partner in the reference period. The reference period varied between the two surveys; in 1995, respondents were asked about non-regular partnerships in the last 6 months while in 2000 they were asked about the 12 months preceding the survey.

Figure 6.4.a. Condom use at last sex with a non-regular (non-marital, non-cohabiting) partner, women.

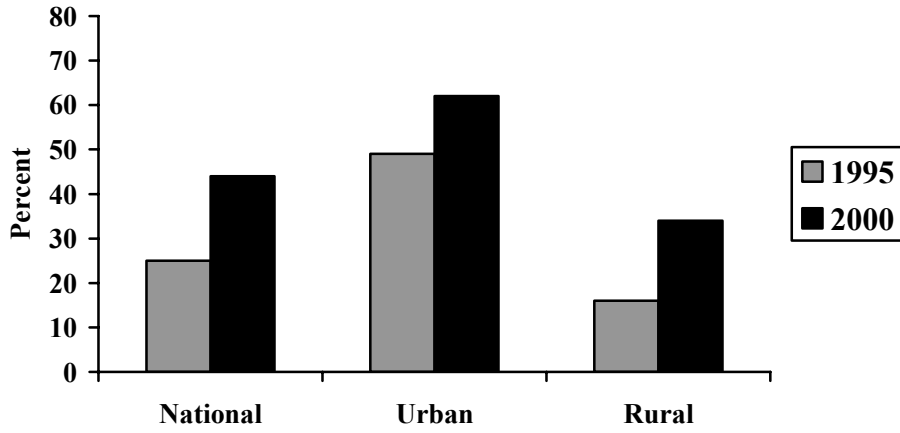
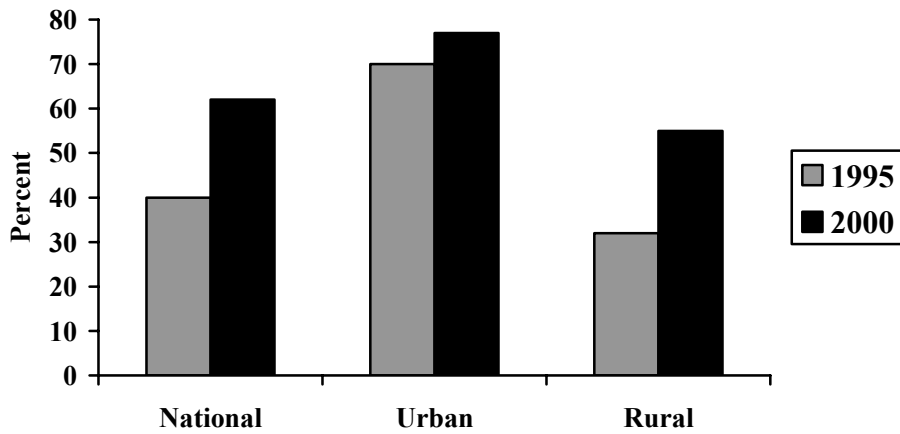


Figure 6.4.b. Condom use at last sex with a non-regular (non-marital, non-cohabiting) partner, men.



7. INDEX OF SEXUAL BEHAVIOR

Exploring the percentage of respondents that report certain types of sexual behavior can be tricky. The indicators presented earlier are interrelated and shifts in one should be interpreted alongside trends in the others. For example, condom use at last sex with a non-regular partner is calculated among respondents who reported such a partner in the reference period. As the number of respondents reporting non-regular partnerships declines, this could result in an increase in the level of the condom-use indicator, even if the number of people that reported condom use with a non-regular partner does not change. Similarly, the condom use indicators (ever use and use at last sex) are calculated among sexually active respondents. As more young people chose abstinence, the denominators for these indicators are also affected. This chapter explores sexual behavior on a continuum of risk.

An index of sexual behavior recently developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS, in press) categorizes youth according to the type of sexual behavior that they engaged in during the previous year, from abstinence (least risky) to unprotected sex with a non-marital partner (most risky). The categories include:

- never had sex;
- had sex, but abstained in the last year;
- only had sex with a cohabiting⁶ partner and used a condom at last sex;
- only had sex with a cohabiting partner and did not use a condom at last sex;
- had a non-cohabiting partner and used a condom at last sex with such a partner;
and
- had a non-cohabiting partner and did not use a condom at last sex with such a partner.

Over time, evaluating the size of each group relative to the others provides an understanding of the behaviors being adopted and which ones, if any, are being replaced and whether shifts are generally toward more risky or less risky behaviors. Because teenagers (15-19) have different sexual behaviors than older youth, the trends in this indicator will be discussed separately by age group. The data are presented for national level estimates and by age group in figures 7.1.a for women and Figure 7.1.b for men and in Table A.7.1 of Appendix A.

⁶ To maintain consistency with the forthcoming UNAIDS National Guide for Monitoring and Evaluation of HIV/AIDS Prevention Programmes for Young People, the term “cohabiting” is used to mean marital or cohabiting partners. This is interchangeable with “regular” partner, a term used earlier in this document to refer to the same type of relationship.

Figure 7.1.a. Index of higher-risk sex, women.

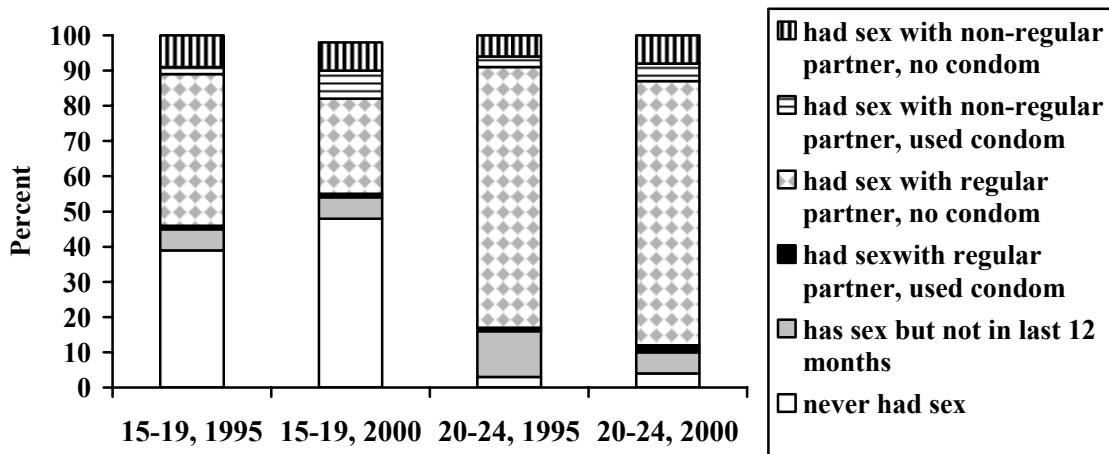
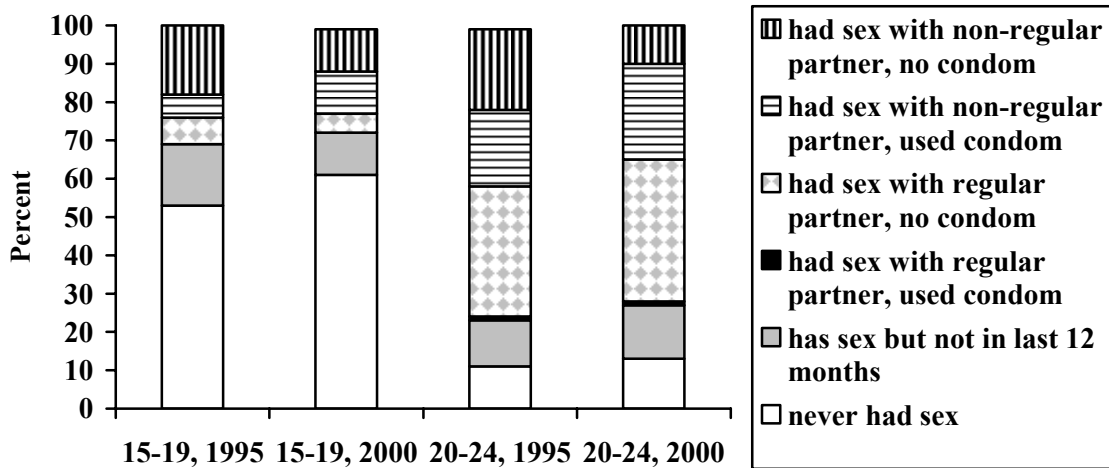


Figure 7.1.b. Index of higher-risk sex, men.



15-19 year olds

In 1995, the most commonly reported behavior among women aged 15-19 was sex with a cohabiting partner without a condom (43%). At that time, only 1% of women in this age group reported that they only had sex with a cohabiting partner and used a condom at last sex. The second most common behavior was primary abstinence, reported by 39% of 15-19 year old women in 1995, which increased to 48% by 2000.

The percentage of women aged 15-19 who reported that they only had sex with a cohabiting partner and did not use a condom at last sex declined from 43% in 1995 to 27% in 2000. This type of behavior was replaced by an increase in abstinence rates (presented previously) and a small increase in the percentage who reported sex with a non-cohabiting partner and condom use at last sex.

Among men aged 15-19 in 1995, the majority (53%) reported primary abstinence. This increased to 61% by 2000 for this group. The next most common behavior in 1995 was sex with a non-cohabiting partner without a condom – 18% of men aged 15-19 reported this behavior. This was three times the percentage of men aged 15-19 who reported condom use with a non-regular partner that same year (6%). By 2000, there was a shift toward more protective behavior among males aged 15-19 with the percentage who used a condom at last sex with a non-marital, non-cohabiting partner almost doubling, to 11%, while those who had sex with such a partner but did not use a condom at last sex declined, to 11%.

20-24 year olds

Older youth are much more likely than teenagers to be married. As a result, many more of them report sex with a cohabiting partner. Although this behavior is more common among women than men, the gender gap is narrowing. In 1995, 75% of women and 35% of men in the 20-24 age group reported that they only had sex with a cohabiting partner during the previous year. These estimates include all respondents who reported that they only had sex with a cohabiting partner, regardless of whether a condom was used at last sex. During the late nineties, the percentage of young women in this group changed little, while the percentage of men having sex only within marriage increased to 38%. In most of these relationships, a condom was not used at last sex. Secondary abstinence rates among women aged 20-24 declined, from 13% in 1995 to 6% in 2000, replaced by an increase in percentage of women who reported each of the other behaviors.

The shifts in behavior among young men in the late nineties involved increased use of condoms during sex with non-marital partners and subtle increases in abstinence (both primary and secondary) accompanied by about a 50% decline in the percentage who reported unprotected sex with non-cohabiting partners. All of these changes represent shifts toward more protective sexual behaviors, which reduce the risk of HIV transmission.

8. TRENDS IN HIV PREVALENCE VERSUS ADOPTION OF PROTECTIVE BEHAVIORS

Uganda has experienced a decline in HIV prevalence that is unprecedented in Africa. In the mid-eighties, Uganda's Ministry of Health began collecting HIV seroprevalence data in Kampala via its sentinel surveillance system, which collects data on the HIV status of pregnant women attending antenatal care (ANC) sites. Women seeking ANC at selected sites are routinely tested for HIV. The sentinel surveillance system was expanded beyond Kampala in 1989, but most sentinel sites are located in cities and towns and thus may provide estimates that are somewhat biased towards a more urban population.

HIV prevalence among younger women is more closely related to HIV incidence than prevalence among older women. This is because younger women have been sexually active for a much shorter period of time, so HIV infections are likely to be more recent. A decline in HIV prevalence among 15-19 year old women is thus a fairly good indicator of a decline in the number of new infections compared with the overall HIV prevalence estimates. Figures 8.1 and 8.2 present HIV prevalence in 15-19 and 20-24 year old antenatal clients, respectively, at several sentinel sites. Among the 15-19 year olds, there is clearly a trend towards declining HIV prevalence at all of the sentinel sites presented, suggesting a decline in new HIV infections. At Nsambya hospital in Kampala, for example, prevalence declined from about 28% in 1991 to about 8% in 1999 among women aged 15-19. Similar declines in HIV prevalence can be seen among those aged 20-24, among whom prevalence rates declined from about 35% in 1991 to 10% in 1999. After 1999, HIV prevalence seems to have leveled off. In Kampala, prevalence declined slightly between 1999 and 2001, but remained stable on average in other areas.

The survey data presented in previous chapters suggest that there was an uptake of some protective behaviors around the same time that prevalence among 15-24 year old women at ANC sites began to decline. During the late eighties, young people adopted many protective behaviors, particularly abstinence and a reduction in high risk sex. The percentage of young women and men who reported abstaining from sex for one full year before the survey, including secondary abstinence, increased. At the same time, the percentage of single young people who reported having premarital sex the previous year declined. Among all young people, the percentage engaging in high risk sex also declined. This included declines in the percentage of respondents (both women and men) who reported at least one non-regular partner and the percentage that reported multiple partners. Unfortunately, during this period the data regarding condom use, one of the largest components of the HIV prevention strategy, were limited. Results of the GPA surveys point to an increase in condom use as the percentages of respondents who reported that they had ever used a condom with a spouse or regular partner increased. However, at the time incidence began declining – the late 1980's – condom use was too low to explain the decline.

Figure 8.1. HIV prevalence at ANC sentinel surveillance sites, 15-19 year olds.

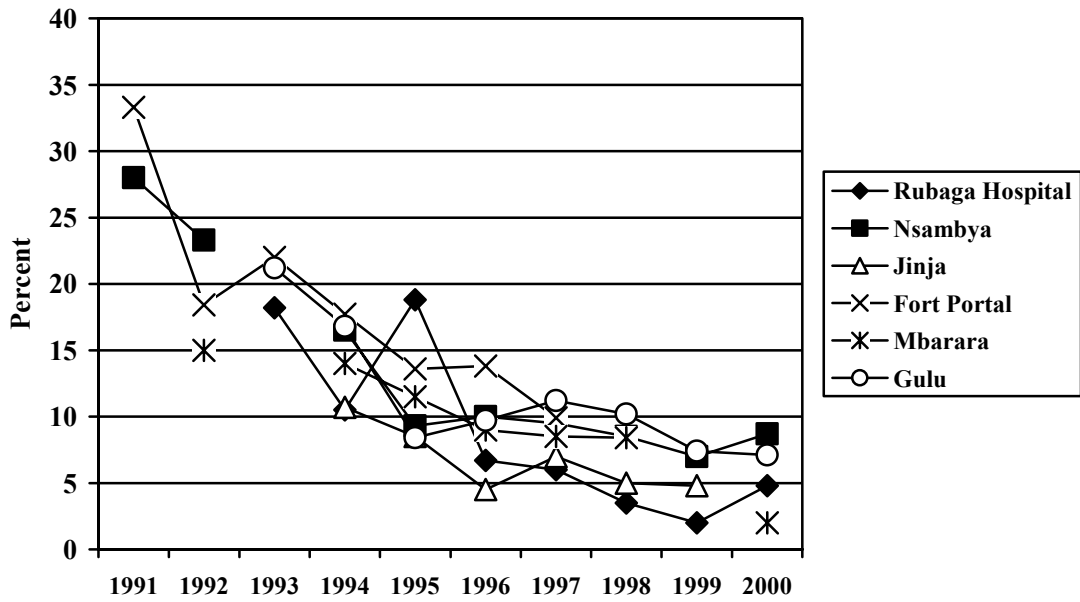
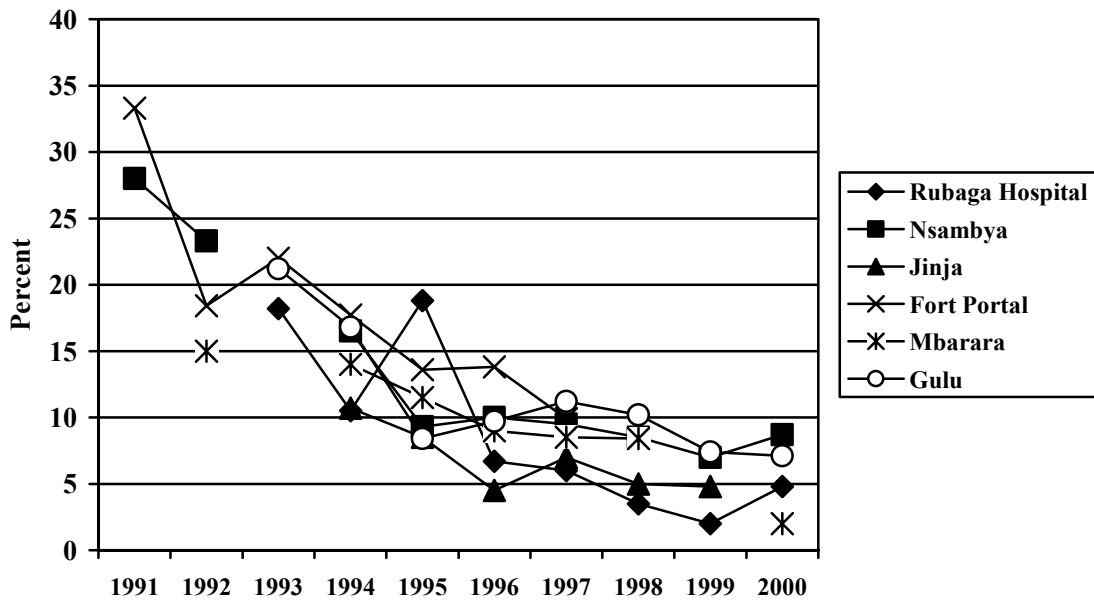


Figure 8.2. HIV prevalence at ANC sentinel surveillance sites, 20-24 year olds.



As the late eighties was a period during which young people were adopting many protective behaviors, it is not possible to pinpoint which of these behaviors contributed most to the reduction in HIV prevalence during the late eighties. It is likely that a combination of abstinence and partner reduction resulted in the decline in prevalence, but that the increase in condom use helped maintain the low prevalence levels throughout the rest of the nineties. Furthermore, the adoption of one behavior compounds the protective effects of the others. For example, if abstinence and condom use increase while non-regular partnerships decline the probability that a high risk sex act will be protected by condom use increases much more so than if just one of the behaviors had been adopted.

This report aimed to look at knowledge and behaviors surrounding the ABC model of HIV prevention. There are other factors that may be associated with HIV infection that are not addressed in this report, such as intergenerational relationships and the practice of wife inheritance. It is possible that changes in some of these practices may have also contributed to the decline in prevalence. Trends in these and other practices associated with HIV infection are worth exploring, to improve understanding about the factors that contributed to the success in Uganda.

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APPENDIX A – DHS TABLES

**Table A.2.1. Socio-demographic characteristics of young women and men
(1989, 1995, and 2000)**

	% Women			% Men*	
	1989	1995	2000	1995	2000
Age					
15-19	54	51	52	51	58
20-24	46	49	48	49	42
Education					
None	25	19	12	7	2
Primary	62	65	64	64	69
Secondary +	13	16	23	29	29
Marital Status					
Never married	40	32	42	67	77
Currently married/cohabiting	53	62	52	29	22
Formerly married	7	6	6	4	1
Residence					
Urban	13	17	20	15	20
Rural	87	83	80	85	80
Migrant†					
Non-migrant	67	47	45	75	63
Migrant in urban area	6	12	15	10	14
Migrant in rural area	27	41	40	15	23
Employment					
Currently employed	10	61	70	n/a	64
Not currently employed	89	39	30	n/a	36
Number (weighted)	2142	3161	3119	754	762

* Men were not included in the 1989 UDHS.

† A migrant is a respondent who has lived in his or her present location for less than five years and is calculated for respondents aged 19-24.

Table A.2.2. Exposure to mass media

	% Women			% Men	
	1989	1995	2000	1995	2000
	<i>Listens to radio regularly*</i>				
National	40	43	56	63	77
Urban	73	73	83	88	91
Rural	35	37	49	56	74
	<i>Watches TV weekly†</i>				
	N/A	7	12	11	15
Urban	N/A	30	39	48	48
Rural	N/A	2	5	4	7
	<i>Reads newspaper or magazine weekly‡</i>				
Urban	N/A	43	43	66	48
Rural	N/A	17	11	24	15

* Wording of this question varied among the three surveys. In 1989, respondents were asked: "Do you usually listen to a radio at least once a week?" In 1995, they were asked: "How often do you listen to the radio?" In 2000, they were asked: "During the last four weeks, did you listen to the radio almost every day, at least once a week, less than once a week, or not at all?"

† Wording of this question varied between 1995 and 2000. In 1995, respondents were asked: "How often do you watch television?" In 2000, they were asked: "During the last four weeks, did you watch television almost every day, at least once a week, less than once a week, or not at all?"

‡ Wording of this question varied between 1995 and 2000. In 1995, respondents were asked: "Do you usually read a newspaper or magazine at least once a week?" In 2000, respondents were asked: "During the last four weeks, did you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?"

Table A.2.3. Modern contraceptive use

	1989	1995	2000
<i>Percent of sexually active women currently using modern contraception by age and marital status*</i>			
Age			
15-19	2	6	16
20-24	2	7	16
Total (15-24)	2	7	16
Residence			
Urban	8	23	40
Rural	1	4	11
Marital Status			
Single	4	20	34
Married	1	5	11
<i>Percent of sexually active women using contraception by method</i>			
None	95	86	77
Pill	2	3	3
Injectables	0	1	5
Condoms	0	3	8
LAM	--	--	2
Traditional	3	7	5

* "Sexually active" was defined as having sex in the last year. Methods considered "modern" for this analysis were the pill, IUD, injectables, vaginal methods, condoms, sterilization, and implants. LAM was not included as a modern method. None of the young respondents reported sterilization, IUD, or implants.

Table A.3.1. Knowledge of HIV/AIDS

	% Women		% Men	
	1995	2000	1995	2000
<i>Has heard of AIDS</i>				
Age				
15-19	99	99	100	100
20-24	99	100	100	100
Residence				
Urban	100	100	100	100
Rural	98	100	100	100
Education				
No schooling	96	99	100	*
Primary School	99	100	100	100
Secondary School	100	100	100	100
Total	99	100	100	100
<i>Knows someone who is living with HIV/AIDS or who has died of AIDS</i>				
Age				
15-19	84	87	89	86
20-24	86	91	91	92
Residence				
Urban	93	92	98	94
Rural	84	88	89	87
Education				
No schooling	72	82	93	*
Primary	87	88	89	88
Secondary	95	94	93	90
Total	85	89	90	89

* Sample size did not permit calculation of this indicator for this subgroup.

Table A.3.2. Knowledge of HIV/AIDS

	% Women		% Men	
	1995	2000	1995	2000
<i>Knows that a healthy-looking person can be infected with HIV</i>				
Age				
15-19	74	72	81	80
20-24	86	80	91	87
Residence				
Urban	89	89	91	94
Rural	80	72	85	81
Education				
No schooling	67	62	83	*
Primary	83	74	82	80
Secondary	95	88	95	90
Total	82	76	86	83
<i>Knows that HIV can be transmitted from mother to child</i>				
Age				
15-19	83	81	85	80
20-24	87	84	84	87
Residence				
Urban	88	92	91	88
Rural	84	80	83	82
Education				
No schooling	77	66	77	*
Primary	86	81	84	82
Secondary	92	95	88	89
Total	85	83	85	83
<i>Knows that HIV infection can be prevented by using condoms</i>				
Age				
15-19	70	64	66	79
20-24	77	73	84	85
Residence				
Urban	88	84	86	90
Rural	71	65	73	79
Education				
No schooling	49	41	69	*
Primary	76	67	72	78
Secondary	94	86	83	89
Total	74	68	75	81

* Sample size did not permit calculation of this indicator for this subgroup.

Table A.3.3. Spontaneously mentioned the following methods of HIV/AIDS prevention

	% Women		% Men	
	1995	2000	1995	2000
<i>Can volunteer one correct way of protecting against HIV: abstinence, limiting the number of sex partners, or condoms</i>				
Age				
15-19	82	84	87	91
20-24	83	88	87	97
Residence				
Urban	93	94	97	96
Rural	81	84	85	93
Education				
No schooling	66	69	69	*
Primary	84	85	85	91
Secondary	98	97	96	99
Total	83	86	87	93
<i>Mentions abstinence as a way of protecting against HIV</i>				
Age				
15-19	38	53	49	67
20-24	31	48	37	64
Residence				
Urban	40	64	54	74
Rural	34	47	42	63
Education				
None	25	35	49	*
Primary	35	48	42	62
Secondary	48	66	46	74
Total	35	51	44	65
<i>Mentions one partner/limit the number of sex partners as a way of protecting against HIV</i>				
Age				
15-19	51	34	45	30
20-24	64	51	53	41
Residence				
Urban	53	44	47	43
Rural	58	44	49	33
Education				
None	51	43	32	*
Primary	59	42	50	30
Secondary	60	48	52	45
Total	58	44	49	35
<i>Mentions "always use a condom" as a way of protecting against HIV</i>				
Age				
15-19	24	56	36	75
20-24	24	63	45	82
Residence				
Urban	45	81	67	87
Rural	20	54	35	75
Education				
None	7	32	20	*
Primary	23	56	34	73
Secondary	51	82	59	89
Total	24	59	40	78

* Sample size did not permit calculation of this indicator for this subgroup.

Table A.3.4. Perceived risk of HIV infection among all adolescents and those who recently had unprotected sex with a non-marital partner

	%Women	%Men
<i>Among all adolescents...</i>		
Feel at no or low risk	70	83
Age 15-19	78	89
Age 20-24	63	78
Feel at moderate risk	18	9
Age 15-19	13	6
Age 20-24	23	13
Feel at high risk	10	7
Age 15-19	8	5
Age 20-24	12	9
<i>Among adolescents who had recent unprotected sex with a non-marital partner...</i>		
Feel at no or low risk	61	68
Feel at moderate risk	24	16
Feel at high risk	15	16

Table A.4.1. Sexual debut, premarital sex, and age at first marriage by age group

	Women			Men	
	1989	1995	2000	1995	2000
	<i>Median age at first sex*</i>				
Age 15-24	16.5	16.7	17.3	17.6	18.3
Residence					
Urban	16.3	17.0	17.0	17.2	17.3
Rural	16.5	16.7	17.3	17.6	18.4
	<i>Percent of 15-19 year olds who had sex by age 15</i>				
Age					
15-19	26	24	14	19	16
20-24	31	27	21	20	9
Residence					
Urban	26	24	16	28	16
Rural	29	26	18	18	12
Education					
No schooling	40	33	30	15	--
Primary	27	27	19	20	13
Secondary	11	11	8	19	13
Total	28	26	18	19	13
	<i>Premarital sex in the past year among single youth (%)</i>				
Age					
15-19	30	17	21	23	22
20-24	58	44	55	53	52
Residence					
Urban	50	27	37	45	47
Rural	33	21	24	31	27
Education					
No schooling	28	14	21	22	-
Primary	33	22	22	34	27
Secondary	51	25	37	33	39
Total	36	22	27	33	31
	<i>Median age at first marriage*</i>				
Age 15-24	17.8	17.6	18.1	22.0	22.8

* Age by which one-half of youth aged 15-24 at the time of the survey have had sex or were married.

Table A.5.1. Abstinence and secondary abstinence

	Women			Men	
	1989	1995	2000	1995	2000
<i>Abstinence: Percentage of all 15-24 year olds who did not have sex in the past year</i>					
Age					
15-19	42	44	54	68	73
20-24	9	16	10	24	27
Residence					
Urban	26	38	36	44	45
Rural	27	29	32	47	56
Education					
No schooling	18	23	17	44	—
Primary	30	29	33	43	54
Secondary	31	47	41	55	53
Total	27	30	33	47	53
<i>Secondary abstinence: Percentage of sexually experienced single youth who did not have sex in the past year</i>					
Age					
15-19	17	25	27	42	35
20-24	20	39	27	29	33
Residence					
Urban	13	39	29	36	26
Rural	19	27	26	36	37
Education					
No schooling	5	—	—	—	—
Primary	21	29	29	31	33
Secondary	16	34	25	44	36
Total	18	31	27	36	34

Table A.5.2. Non-regular and multiple partnerships

	% Women		% Men	
	1995	2000	1995	2000
<i>At least one non-regular sexual partner in the last year*</i>				
Age				
15-19	30	36	64	81
20-24	22	15	51	48
Residence				
Urban	34	38	73	80
Rural	24	19	52	53
Education				
No schooling	19	8	38	§
Primary	25	18	52	53
Secondary	39	46	67	76
Total	25	22	55	59
<i>Single youth reporting 2+ sexual partners in the last year*†</i>				
Age				
15-19	11	7	27	22
20-24	11	3	36	38
Residence				
Urban	8	7	33	37
Rural	12	5	32	27
Education				
No schooling	‡	1	‡	§
Primary	17	5	33	33
Secondary	7	7	29	26
Total	11	5	32	30
<i>Extramarital sex in the last year‡</i>				
Age				
15-19	§	§	21	23
20-24	§	§	27	14
Residence				
Urban	4	3	33	18
Rural	3	3	27	15
Education				
No schooling	§	§	4	§
Primary	§	§	28	7
Secondary	§	§	28	12
Total	3	3	27	16

* Among young people who reported having had sex in year preceding the survey.

† Reference period is six months for the 1995 survey and one year for the 2000 survey.

‡ Among married/cohabiting respondents.

§ Sample size did not allow the calculation of this indicator for this subgroup.

Table A.6.1. Condom use among sexually active young people

	% Women			% Men	
	1989	1995	2000	1995	2000
<i>Condom ever use*</i>					
Age					
15-19	1	8	28	21	44
20-24	1	8	20	28	61
Residence					
Urban	4	25	51	48	79
Rural	1	5	16	21	47
Education					
No schooling	0	1	5	8	†
Primary	1	6	18	22	47
Secondary	5	28	51	40	70
Currently married					
No	2	20	45	33	60
Yes	1	5	14	16	46
Total	1	8	23	26	55
<i>Condom use at last sex‡</i>					
Age					
15-19	U	5	19	19	42
20-24	U	4	7	24	31
Residence					
Urban	U	14	27	53	62
Rural	U	3	8	16	27
Education					
No schooling	U	0	2	12	†
Primary	U	4	8	16	26
Secondary	U	16	30	42	56
Currently married					
No	U	26	41	42	58
Yes	U	2	2	5	8
Total	U	4	11	22	35
<i>Condom at last sex with a non-regular partner§</i>					
Age					
15-19	U	20	49	26	52
20-24	U	30	37	49	71
Residence					
Urban	U	49	62	70	77
Rural	U	16	34	32	55
Education					
No schooling	U	†	†	†	†
Primary	U	19	33	33	54
Secondary	U	44	60	59	75
Total	U	25	44	40	62

* Among respondents who have ever had sex. This question was asked in the context of family planning.

† Sample size did not permit calculation of this indicator for this subgroup.

‡ Among respondents who had sex in the year preceding the survey.

§ Among respondents who had sex with a non-regular partner in the year preceding the survey.

U = Unavailable.

Table A.7.1. Index of sexual behavior for 1995 and 2000

	% Women		% Men	
	1995	2000	1995	2000
<i>Percentage of young people who have never had sex (primary abstinence)</i>				
Age				
15-19	39	48	53	61
20-24	3	4	11	13
Total	21	27	32	14
<i>Percentage who have had sex, but abstained in the last year (secondary abstinence)</i>				
Age				
15-19	6	6	16	11
20-24	13	6	12	14
Total	9	6	14	13
<i>Percentage who had sex only with a marital partner and used a condom at last sex</i>				
Age				
15-19	1	1	0	0
20-24	1	2	1	1
Total	1	1	1	1
<i>Percentage who had sex only with a marital partner and did not use a condom at last sex</i>				
15-19	43	27	7	5
20-24	74	75	34	37
Total	58	51	20	18
<i>Percentage who had sex with a non-marital, non-cohabiting partner and used a condom at last sex with such a partner</i>				
15-19	2	8	6	11
20-24	3	5	20	25
Total	3	7	13	17
<i>Percentage who had sex with a non-marital, non-cohabiting partner and did not use a condom at last sex with such a partner</i>				
15-19	9	8	18	11
20-24	6	8	21	10
Total	8	8	20	11

APPENDIX B – GPS SURVEY TABLES

Table B.2.1. Socio-demographic distribution of young women and men in the 1989 survey of eight districts and 1995 survey of four districts, GPA surveys

	Women		Men	
	1989	1995	1989	1995
Total sample (n)	580	1372	515	823
Age (%)				
15-19	48	53	41	51
20-24	52	47	59	49
Marital Status (%)				
Never married	--	41	--	64
Married	59	52	25	31
Divorced/widowed	--	7	--	5
Residence (%)*				
Urban	39	38	39	36
Rural	61	62	61	64
Education (%)				
No formal education.	20	20	7	7

* All cities, towns and trading centers are considered urban, while villages are considered rural.

Table B.3.1. Proportion of young women and men with knowledge of AIDS

	% Total	% Urban	% Rural
<i>Eight districts of Uganda, 1989 GPA survey</i>			
Has heard of AIDS			
Women	97	98	97
Men	98	98	98
Knows HIV can be avoided			
Women	84	86	84
Men	87	91	85
Knows someone with HIV or who has died of AIDS			
Women	50	57	46
Men	55	68	47
<i>Four districts of Uganda, 1995 GPA survey</i>			
Knows someone with HIV or who has died of AIDS			
Women	60	79	49
Men	57	76	46

Table B.3.2. Proportion of young women and men with knowledge of AIDS

	% Total	% Urban	% Rural
<i>Eight districts of Uganda, 1989 GPA survey</i>			
Knows infected person can appear healthy			
Women	47	59	40
Men	55	68	47
Knows HIV can not be transmitted by mosquitoes*			
Women	22	27	18
Men	33	38	30
Knows HIV can be transmitted from mother to child			
Women	82	88	80
Men	90	93	88
Knows someone with HIV or who has died of AIDS			
Women	50	57	46
Men	55	68	47
<i>Four districts of Uganda, 1995 GPA survey</i>			
Knows infected person can appear healthy			
Women	49	54	45
Men	46	54	46
Knows HIV can not be transmitted by mosquitoes*			
Women	42	47	38
Men	32	24	37

* Based on responding "no" to a probed question as to whether one can get AIDS from being bitten by a mosquito.

Table B.3.3. Proportion of young women and men with knowledge of AIDS

	% Total	% Urban	% Rural
<i>Eight districts of Uganda, 1989 GPA survey</i>			
Feels that they are at risk for HIV transmission*			
Women	51	53	51
Men	57	65	53
<i>Four districts of Uganda, 1995 GPA survey</i>			
Feels that they are at risk for HIV transmission†			
Women	42	39	43
Men	41	40	42

* An additional 22% of women and 15% of men responded that they were unsure if they were at risk.

† An additional 21% of women and 16% of men responded that they were unsure if they were at risk.

Table B.5.1. The percent of young women and men 15-24 years abstaining during past year

	% Women		% Men	
	1989 n=580	1995 n=1372	1989 n=515	1995 n=823
<i>Sexual abstinence, no sex during the past year</i>				
Residence				
Urban	15	49	30	57
Rural	22	31	30	48
Age				
15-19	37	58	44	77
20-24	7	16	20	25
Total	19	38	30	51

Table B.5.2. The percent of young women and men aged 15-24 years engaging in higher risk sexual behavior

	Women		Men	
	1989 n=580	1995 n=1372	1989 n=515	1995 n=823
<i>One or more non-regular partners in the past year*</i>				
Residence				
Urban	37	24	71	46
Rural	29	9	70	21
Age				
15-19	46	16	90	38
20-24	23	12	68	26
Total	32	13	71	29
<i>Two or more partners in the past year, sexually active single†</i>				
Residence				
Urban	(23)	22	48	31
Rural	(25)	8	59	25
Age				
15-19	(24)	13	53	30
20-24	(24)	22	57	29
Total	24	18	55	29
<i>Extramarital sex in the past year‡</i>				
Residence				
Urban	(7)	(10)	(31)	(29)
Rural	(8)	6	(23)	13
Age				
15-19	(8)	(8)	(20)	(19)
20-24	(7)	6	26	15
Total	8	7	26	16

* Includes respondents in marital or cohabiting unions.

† Includes non-married respondents who had sex in the past year.

‡ Figures in parentheses were calculated based on less than 20 observations. The 1995 estimates are based on married respondents only, excluding cohabiting respondents. The 1990 GPA and both the UDHS surveys included cohabiting respondents in the denominator. During the 1990 GPA, only 8% of the married or cohabiting respondents were not married. Therefore, the difference in how the indicator was calculated should affect the estimates only slightly.

Table B.6.1. Proportion of young women and men reporting knowledge and use of condoms

	Women		Men	
	1989 n=580	1995 n=1372	1989 n=515	1995 n=823
<i>Aware of condoms</i>				
Residence				
Urban	65	94	80	98
Rural	38	86	60	95
Age				
15-19	41	88	55	94
20-24	55	89	77	96
Total	49	89	68	96
<i>Knows where to get condoms</i>				
Residence				
urban	16	59	44	82
rural	9	16	26	35
Age				
15-19	8	28	31	53
20-24	15	30	35	49
Total	12	29	33	50
<i>Has ever used condoms*</i>				
Residence				
urban	10	54	29	70
rural	8	13	16	19
Age				
15-19	13	25	24	46
20-24	6	27	20	32
Total	9	26	22	35

* Has ever used a condom with a regular or marital partner among respondents who had sex in the last year.

APPENDIX C – COMPARABILITY OF UGANDA GPA AND DHS SURVEYS

The Global Programme on AIDS (GPA) surveys were conducted in many countries throughout the late 1980s and early 1990s before other large surveys had begun to focus on HIV/AIDS and respondents' knowledge of the disease. Thus, for some countries, these surveys provide the only source of data on knowledge, attitudes, behaviors, and practices related to HIV/AIDS at a time when the epidemic was emerging. While certain indicators calculated from these data are useful, the methodology, questionnaire design, and wording of the questions differ from those of later surveys making it difficult to compare some indicators across time. Samples coverage also varied and was not always nationally representative even in surveys with broad national coverage.

In Uganda, GPA surveys were conducted in 1989 and 1995 though sample coverage and questionnaires differed substantially. While the 1989 survey is often referred to as a national survey, it was conducted in eight districts and was designed to over-represent Kampala, the capital. The 1995 survey covers four districts. As detailed information on the sampling procedures are not available, and sample weights were not calculated, it is not possible to adjust for the non-representativeness of the sample. This has implications when assessing trends across GPA surveys as well as between GPA and later surveys, such as the DHS.

Table C1 presents a comparison of background characteristics of the female samples included in the 1989 and 1995 GPA surveys and the 1989 and 1995 DHS. The distribution of the women by age across surveys is very similar, as is the distribution of women by current marital status. The greatest differences are in the geographic representations of the samples. Thirty-one percent of the respondents in the 1989 GPA survey reside in Kampala and 27% in the 1995 GPA survey. This compares to 6% and 7% in the DHS surveys conducted the same years. As a result, 39% of the 1989 GPA respondents and 36% of the 1995 GPA respondents are considered to be urban dwellers as compared to 12% and 15%, respectively, of the DHS respondents. Definitions of residence also differ between the GPA and DHS surveys. In the GPA surveys, residents of all cities, towns, and trading centers are considered urban while residents of villages are considered to be rural. In the DHS, women living in clusters located in localities with a population size greater than 1,000 are considered to be urban. As indicators of sexual behavior vary by urban-rural residence as well as by region, comparison of indicators between the surveys can be problematic. For example, data from both the GPA and DHS surveys indicate that higher-risk sexual behavior is most common in the central region (which includes Kampala) and in the eastern region of the country, and least common in the southwest.

The differences in urban-rural residence are reflected in the distribution of female respondents with respect to education and household amenities, a measure of socio-economic status. In 1989, a larger percentage of women in the DHS had no formal education as compared to the GPA. No such differences exist between the 1995 surveys. Respondents in the 1989 GPA were also much more likely to have amenities in the household such as electricity, radios, and television than were respondents in the DHS that same year. Even when stratified by residence, respondents in

the GPA survey were more likely to have these amenities than their counterparts in the DHS. Unfortunately, the 1995 GPA collected little background information on respondents so comparisons with the 1995 DHS are not possible on these variables. The percent of women with no formal education is smaller in the GPA than in the DHS in 1989. What is interesting is that the percent of women with no formal education is similar in the 1995 GPA and DHS surveys, despite large differences in distribution on respondents by urban-rural residence. (Thus, if one were interpreting changes in education status of women based on GPA data, one would conclude that there was no change in the percent of women receiving formal education between 1989 and 1995. Yet based on DHS data over the same five-year period, more women were receiving formal schooling.)

A comparison of indicators of sexual activity among young women between the GPA and DHS surveys yielded some interesting findings. The 1989 GPA reported higher levels of sexual activity among adolescent females than did the 1989 DHS. This may be attributable in part to the urban bias in the GPA as sexual activity appears to start slightly earlier in urban areas. This difference remains, however, when stratified by urban-rural residence. Unfortunately, no other indicators for women and none for men can be compared across surveys in 1989.

When comparing the 1995 surveys, the GPA survey reports lower levels of sexual activity among adolescent men and women as compared to the DHS, the reverse of what was found when comparing the 1989 surveys. Differences are apparent when comparing the urban and the rural samples in each survey. Among women, overall estimates of sexual activity in the past 12 months, sex with non-regular partners, and casual sex are similar between the two surveys though differences are apparent when stratified by residence. In contrast, ever use of condoms by women is three times higher in the GPA than in the DHS. For men, however, the GPA survey appears to underestimate sexual activity as compared to the DHS. A much larger percent of men report non-regular partners and casual partners in the DHS and the differences are apparent among both urban and rural residents. Levels of extramarital sex, however, are similar. As with women, ever use of condoms is much higher among men in the GPA survey (a two-fold difference). It is not clear why levels of sexual activity are lower (and condom use is higher) in the GPA than in the DHS conducted the same year.

An assessment of trends in sexual activity among youth in the early nineties using the GPA data would yield much larger reductions in sexual activity than would similar comparisons using the DHS. While it is not possible to assess differences in trends across surveys of sexual partnerships, the lower levels of non-regular and casual partnerships among men in the 1995 GPA indicate that the same may be true. Differences between surveys may be related to differences in questionnaires (there are large differences between the 1989 GPA and the 1995 GPA and DHS questionnaires), sample coverage, or survey implementation. While the GPA data are valuable in helping to understand the changes that occurred in Uganda during the early nineties, these limitations should be considered when interpreting the findings.

Table C.1. Comparison of demographic characteristics of female samples in 1989 and 1995 Uganda DHS and 1989 and 1995 GPA surveys

	1989		1995	
	GPA n=1429	UDHS n=4730	GPA n=3089	UDHS n=7070
	<i>Age</i>			
15-19	19	25	23	23
20-24	21	21	21	22
25-39	46	41	44	43
40-49	11	13	12	12
50+	2	0	0	0
	<i>Marital status</i>			
Currently Married	65	67	68	73
Formerly Married	u	13	12	12
Never Married	u	20	20	16
	<i>Region*</i>			
Kampala	31	6	27	7
Eastern	20	28	U	25
Central	26	25	U	21
Western	23	36	U	28
Northern	0	6	U	20
	<i>Residence[†]</i>			
Urban	39	12	36	15
Rural	61	88	64	85
	<i>No formal education</i>			
	27	38	29	31
	<i>Household amenities</i>			
Electricity	24	7	U	9
Radio	53	28	U	44
Television	7	2	U	5

* Based on district groupings from 1989 UDHS.

† Definitions of urban-rural residence differ between GPA surveys and DHS. In the GPA surveys, all cities, towns and trading centers are considered urban, while villages are considered rural. In the DHS, all clusters located in localities with a population size of greater than 1000 are considered urban.

U = Unavailable.