Has high knowledge of HIV/AIDS among the youth translated into positive sexual behavior in Northern Uganda

BY

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Abstract

Uganda has been hailed for reducing HIV/AIDS epidemic from 18% prevalence in 1992 to 6.1% in 2001. However it has recently risen to 6.4% in 2004/5. Northern Uganda which has faced political turmoil and insurgency for the past 20 years presents a mixed picture with the highest prevalence of 8.2% in the country. The main objective of the paper is to investigate the relationship between socioeconomic factors and knowledge of HIV/AIDS among youth and their positive practices in Northern Uganda Region. Data on 910 youth from Northern Uganda was extracted from the national Uganda demographic and health survey of 2006 and univariate, bivariate and multivariate analyses used.

The results show that almost every youth (98%) have heard of HIV/AIDS and a high percent of the knowledgeable youth, were willing to test for HIV. However, these high proportions do not translate into positive behavior. For instance, only 7% of the respondents were abstaining from sex at the time of the survey, and a high 23% had sex with at least 2 partners. Cross tabulations of positive practices with the characteristics of youth show that the mean number of multiple sexual partners was significantly associated with age, education, and marital status while condom use at last sex in the last 12 months was significantly associated with sex, age, residence, education, marital status and religion.

Furthermore, significant association was found between willingness to test for HIV and sex and residence. At the multivariate analysis level, the results show that age, residence, education, occupation, knowledge of one dead or sick of AIDS and risk perceptions were significant predictors of condom use at last sex. Only sex was observed to be significantly related with willingness to test for HIV. These findings have important implications for the development of primary HIV/AIDS prevention programs for youth in war torn areas. There is need for sensitizing youth on the need to adopt safe sexual behavior. A comprehensive school sex education programme that scales up the understanding of safe behavior for all youth and enables girls to negotiate for safe sex will be required.

Introduction
Acquired Immune Deficiency Syndrome (AIDS) is caused by a human immunodeficiency virus (HIV) that weakens the immune system, making the body susceptible to opportunistic diseases that often lead to death. The predominant mode of HIV transmission is through heterosexual contact, followed in magnitude by perinatal transmission, where the mother passes the virus to the child during pregnancy, delivery or breastfeeding. Other modes of transmission are through infected blood and unsafe injections.

HIV/AIDS is a global challenge that has threatened the very existence of the human race. By 1995, there was no country in the world without HIV cases (WHO 1995). The African continent is said to hold the vast majority of the world's HIV infected population. It is estimated that in 2007 of the 33.0 million people living with HIV/AIDS, 22.0 million of them live in sub-Saharan Africa, (UNAIDS, 2008). More than 25 million people have died of AIDS worldwide since 1981. Africa has 11.6% of her children as AIDS orphans. Women accounted for 50% of all adults living with HIV worldwide and for 59% in sub-Saharan Africa. Young people (under 25 years old) account for half of all new infections worldwide (UNAIDS, 2008).

Uganda has experienced a severe and devastating epidemic of HIV infection and AIDS for more than a quarter of a century. The epidemic started on the shores of Lake Victoria in Rakai District. Thereafter, HIV infection spread quickly, initially in major urban areas and along highways. By 1990s, HIV had reached all districts in the country, resulting in what is classified as a generalized epidemic. As in other countries in sub-Saharan Africa, Uganda's HIV/AIDS epidemic is predominantly spread through heterosexual contact.

The impact of the disease has been mainly felt through the escalating morbidity and mortality that disproportionately affects women during the prime of their productive life. The consequences of the epidemic span across all spheres of life of individuals and communities nationwide.

It has imposed a severe and unsustainable burden on the meager health sector resources, as funds are diverted from other areas to HIV prevention and AIDS care and treatment services. HIV infection has also given rise to an epidemic of opportunistic infections, notably tuberculosis (TB). Treatment of some of these opportunistic infections is more expensive than that of AIDS.

In Uganda, the national HIV prevalence peaked at around 15 % in 1991 and fell to 5% in 2001 (UNAIDS 2002). According to the results of the Uganda HIV/AIDS Sero-Behavioural Survey (UHSBS) of 2004/5, the national prevalence of HIV was estimated at 6.4%. HIV/AIDS therefore, continues to represent a significant public health problem. A major concern is that the AIDS epidemic is influencing the nature and quality of health care through occupational transmission (Verbeck et al, 1991).

All persons between 15 – 24 years are defined as youth (WHO, 1989). The youthful stage is a time when most people are beginning to experiment with sex and are being exposed to the dangers inherent in the process. Youth go through both physical and emotional stages of transition from childhood to adulthood. The youth in Uganda as a group are highly at risk of HIV infection. Previous studies of sexual behavior among Ugandan youth indicate an early initiation of sexual activity. An adolescent reproductive health survey revealed that the median age at first sexual intercourse was lower for females than for males (PEARL, 2000). In addition, 14% of youth had sex before they turned age 15 and 63% of women and 47% of men had sex before 18 years old (UBOS and Macro International, 2007). This behavioral pattern has important implications for HIV transmission among young, especially female adolescents.

Youth in Northern Uganda
Youth in Northern Uganda are at the centre of the national HIV/AIDS epidemic. Most of the youth in this region have lived in internally displaced camps (IDPs) for fear of death in the last 2 decades. According to the Uganda demographic and health survey (UDHS) of 2006, the median age at first intercourse of those aged less than 25 years was reported to be 16.4 years, which is quite low. Uganda including northern region has one of the highest teenage pregnancies in the world (UBOS, 2007). Consequently, the recent HIV/AIDS Sero-Behavioural Survey (UHSBS) of 2004/5 reported the central districts of the northern region to have the highest HIV prevalence at 8.2%, because of prolonged civil conflict and insurgency for a long time (MOH 2005). This paper seeks to investigate whether the high knowledge among youth has led to positive sexual behavior in Northern Uganda. Specifically, the paper will establish the knowledge of HIV/AIDS among youth, study their attitudes towards HIV/AIDS, identify their practices and explore the relationship between socioeconomic factors and knowledge and practices.

Methodology

The paper is based on a study that was conducted in Northern Uganda and targeted youth between the age 15 -24 years. Northern Uganda is composed of West Nile (with Arua, Adjumani, Moyo, Nebbi, and Yumbe districts) Northern Central (with Lira, Apac, Gulu, Kitgum, and Pader districts) and North East (with Kaberamaido, Katakwi, Kotido, Kumi, Moroto, Nakapiripirit and Soroti districts).

Secondary data was used from the Uganda Demographic and Health survey (UDHS), conducted by Uganda Bureau of Statistics (UBOS) and Macro International 2006. This survey was conducted with a general objective of providing information on demographic, health and family planning issues and trends in the country. Nine hundred and ten (910) respondents from Northern Uganda Region in the age group 15 – 24 were asked questions on their knowledge, attitudes and practices towards HIV/AIDS.

Analysis of the data went through three stages namely univariate, bivariate and multivariate. Cross tabulations were run to establish the association between knowledge and attitudes about AIDS and sexual behaviour. Other variables expected to influence individual behaviour in form of socio economic characteristics were age, sex, marital status, income, education level, occupation, cultural beliefs, residence and employment status. The association of these variables with the intermediate variables of knowledge and attitudes towards AIDS were established. The dependent variable, behavioural change was measured in terms of the mean number of sexual partners, condom use and willingness to go for an HIV test. The significance of the associations between the variables was established by conducting the chi-square tests and a p-value of 0.05 and less indicated the level of significance.

At the multivariate analysis level, the binary logistic regression model was fitted to examine the relationship between the sexual behavior (dependent variable) and the independent variables (knowledge and attitudes). The method was deemed appropriate for analysis because the dependent variable is dichotomous or binary in nature (change or no change in behavior). The model was used to calculate the odds ratios for the exposure categories of the main study variables carried out.

The binary logistic model (Hair et al, 1998) fitted was in this form:

$$Log \frac{p}{(1-p)} = \left(B_0 + B_1 X_1 + \ldots + B_n X_n\right)$$

Where:

B_s = the estimated coefficients

X_s = the independent variables

n = number of variables

p = probability of youth changing behavior

The model shows the likelihood of a youth changing his sexual behavior relative to a reference category for each of the independent variables. Independent variables were categorized and for each category dummy variables were created. This was done in reference to the category hypothesized with the lowest likelihood for behavior change called the reference category. The likelihood of a youth changing his sexual behavior varies across socio-economic and demographic characteristics. However, the odds ratios were assumed to remain constant across the exposure duration.

The odds ratio is the ratio of odds that an event will occur to the odds that it will not occur. A factor less than one means reduced odds while that greater than 1 means increased odds. Variable categories with p-value ≤ 0.05 were deemed significant. The R-static which is used to analyze the partial correlation between the dependent variable and each of the independent variable ranges between the dependent variable and each of the independent variables, ranges between -1 and +1. A positive value indicates that as a dependent variable increases in value so does the likelihood of the event occurring and the reverse is true for the negative value. The R-statistic measures the partial contribution of the variable to the model.

Results

Table 1 shows the results of the univariate analysis. The table shows a predominantly female (59%) population; the majority of whom were young adults (56%) aged 20-24 years. Most (57%) of the respondents lived in urban areas where a large proportion of males (75.8%) lived. The highest percentage of youth were peasants (48%) and clerical workers (17.4%) formed the smallest occupation. The majority (44%) of the youth had attained primary education while the Catholics were almost half (48.3%). Two thirds (67%) of the youth were married while only 9.8% were never married. The highest proportion of the youth (47%) were from the West Nile Region, 41% were from the North Central and only 11% were from North East Region.

Results presented in Table 2 show that most respondents had heard about AIDS (97.7%), knew who was living with HIV or dead with AIDS (86%) and knew who were at risk of HIV infection (65.5%). All male youth had heard about HIV/AIDS and a high percent of them knew someone dead or sick with AIDS (92.2%) and were at risk of infection (71.7%). The table shows there was a significant difference between knowledge and lack of knowledge of some one with HIV/AIDS (p=0.002).

The cross tabulations of background characteristics of respondents and behavioural change are showed in Tables 3, 4 and 5. Overall, Table 3 shows that most of the respondents were using the protection measure of sticking to one sexual partner (63.8%) followed by protected sex (24.2%), and abstinence (6.7%). Those who did not know any method of protection were 5.4%. These results indicate that low a proportion (of less than 7%) of the respondents abstain from sex which implies that youth begin sexual intercourse at a very young age.

On specific age groups, it is worth noting that none of the adolescents aged 15-19 years was abstaining and only 5% of those aged 20-24 had not started sexual activity. This is mostly because over 90% of the youth were either married or in cohabitation. This is a worrying phenomenon for the future health of these youth. However, the majority of the respondents in both age groups reported being faithful to their partners. Condom was also used by a sizeable proportion of youths (32% of the adolescents and 21% of the young adults), with males leading females in using this protection measure, as the females use the faithfulness more than males.

Table 3 shows that higher proportions of rural residents were faithful to their partners (70%) than the urban residents (51%). In contrast more urban residents were using condoms (35.6%) than the rural respondents (20.4%) which is expected since urban youth are more exposed to information about condoms than their rural counterparts. There was no significant association between the place of residence and method used for protection against HIV/AIDS (p=0.580).

It is interesting to observe that the level of faithfulness and use of condoms increases with education of the youth. This is probably due to higher education giving exposure to the youth to information, education and awareness on HIV/AIDS. The table shows that there was a strong significant association between method of protection used and level of education (p=0.000).

Faithfulness was highest for peasants (75.1%) and clerical workers (60.3%) and lowest among business persons (54.9%) and casual workers (49.2%). The reason for these results may be the peasants having less money than the business persons with higher income to afford buying condoms. In contrast, abstinence was much lower among the business persons (6.6%), clerical workers 5.2% while casual workers had the highest proportion abstaining (16.5%). This pattern may reflect the low incomes of casual workers whose viable alternative of protection is abstinence. The method of protection and occupation were significantly associated (p=0.005).

As expected the never married were least faithful to their partners (37%) and the currently married were the most faithful (69%). In addition, the never married youth had the highest rate of condom use (58.6%) and only 1% of

them were abstaining. Not surprising the separated, divorced and widowed had the highest percentage abstaining from sex (16.9%) since they did not have regular sexual partners. The table shows a significant association between marital status of the respondents and the protective method used against HIV infection (p= 0.002).

In terms of the sub-regions of the north, West Nile had the highest proportion (70.4%) of respondents using faithfulness as a method of protection, followed by North East (66.9%) and the North Central had the least (46.7%). The North Central sub-region had the highest proportion of respondents using condoms as a method of protection (39.6%), followed by North East (39.6%) while West Nile had the least (22.6%). The West Nile sub-region had the highest respondents abstaining (5.7%) followed by North East (4.4%) and the North Central had the least (2.7%). It is interesting that the respondents in North Central region were leaders in using nothing to protect themselves (11%) compared to North East (3%) and the West Nile (1.3%). This may be due to the war in North Central that exposed many youth to rape, which made them to think that it was useless to use anything to protect themselves when they were already infected through rape. The association between the method of protection and sub-region was not significant (p=0.12).

Catholics (65.1%) led in using faithfulness as a method of protection, followed by Protestants (60.8%) and the least were Moslems (55.5%). The Moslems used faithfulness least because the definition of faithfulness of sticking to one partner is counter to accepted practices of marrying up to four wives. On the other hand, the Moslems used condoms (30%) and abstinence (12%) more than the youth of other religions did. There is no significant association between religion and protection (p=0.881).

The results of bivariate analysis of respondents' characteristics and the number of sexual partners with whom the youth had sex in the last 12 months is given in Table 4. Overall, 69.9% of the male and 67.6% of the female youth had sex in the past 12 months, 27.1% of male youth had sex with 2+ partners in the past 12 months, much higher than 7.8% of the female youth. The table shows that the percentage of youth who had sex currently and the mean number of life time sexual partners increased with age. While the rural youth had more sex currently, their life time partners were fewer than for the urban dwellers. The more educated one was, the less one had sex currently, but the more life partners one had. In North Central which had most conflicts and IDPS, the youth has sex most frequently followed by North East and West Nile was last. As expected, the currently married had sex most frequently than other categories. However, the married male youth had more life time sexual partners than the rest. The youth who were older, in urban areas, with secondary education and above, and never married had more multiple sexual partners than other categories.

Table 5 is about condom use and background characteristics. The table shows that younger youth used condoms (32%) more than the older youth, perhaps because adolescents were more single than the young adults. The use of condoms by male youth (38%) was almost 3 times as that of female youth (14%) with a highly significant variation (p=0.000). Urban youth used condom (36%) nearly two and half times as those in rural areas (15%) and the association is significant (p=0.001). As expected, the respondents with the highest education of tertiary level used the condom most followed by those with secondary education, primary level and the non-educated were least with a highly significant association (p=0.000). Other characteristics, namely religion, occupation and marital status were significantly associated with use of condom (p<0.00). It is only sub-region and age that were not significantly associated with condom use.

At multivariate stage of analysis, the logistic regression model was fitted to examine the relationship between socioeconomic and intermediate variables and condom use and the results are given in Table 6. The table shows that the respondents in the age group 20-24 had 2.2 times more odds than those aged 15-19 not to use condoms. Age group 20-24 also has an R-value of 0.1054, which shows that there is a relationship between the age of a respondent and their use of condoms. The relationship is significant (p=0.006). These results can be interpreted that adolescents are more likely to use condoms than older youth. This may be because young adults frequently have sex with regular partners, usually their wives and therefore do not feel the need to use condoms. On the other hand, adolescents engage in sexual encounters with multiple partners for adventure, since they often do not have regular partners and in cases where they do, they are not faithful to them. This makes it necessary for them to use condoms as a measure of protection from unwanted pregnancy, STDs and HIV/AIDS.

The table also shows that female youth had 3.5 times more odds not to use condoms than men. The R-statistic of 0.1887 indicates a relationship between the sex of the respondent and their condom use. The relationship is highly significant (p=0.000). The results are not surprising, considering that condoms commonly available in the country were designed for men. Secondly, the low bargaining power of women in sexual matters due to low social status and dependence on the opposite sex may explain the results. Thirdly, cultural norms and beliefs which emphasize men making decisions, in particular those related to sexual matters which leaves women with no say, may be to blame for low condom use by females.

The analysis results further show that rural residents had 3.3 times more odds not to use condoms than the people in urban areas. There is a statistical relationship between residence and condom use (R=0.143), which is highly significant (p=0.0007). These results may be explained by inaccessibility and

unaffordability of condoms in rural areas, and the rural residents having a higher level of faithfulness, which reduces their need for condom use.

In addition the table shows that condom use increases with increasing education. Respondents with no education had 2.5 times odds, those with primary education had 2.2 times odds not to use condoms than the youth with secondary education and the relationship is significant ($p<0.05$). This is because higher level of education promotes condom use due to increased awareness about how to use condoms, benefits of condom use, increased bargaining power for women and dangers of not using condoms.

The odds ratios for non use of condoms was highest for peasants (2.5) followed by casual laborers (2.3) and clerical workers (1.4) compared to youth in business and the relationship was significant for peasants ($p=0.0112$) and casual laborers ($p=0.0125$). The reasons for the results may probably be the high level of faithfulness among peasants who together with casual labourers may not afford condoms as much as others can do.

It is interesting to note from the table that married youth had twice as many odds as those separated, divorced or widowed not to use condoms. There is a statistical relationship ($R=0.072$) between the category of youth who had been married before and condom use which is significant ($p=0.028$). Marital status is related highly to non use of condoms because in marriage people assume faithfulness and the never married are expected to use condoms as they are having sexual intercourse with casual and non regular partners.

There is no significant relationship between being a Protestant and condom use. The R-statistic of 0.0521 shows a weak contribution of being a Catholic to condom use. The Catholics had almost twice as many odds as Moslems in not using condoms.

The surprising results in the table can be seen on the variables of knowledge of one dead or sick of AIDS and perception of risks to HIV infection. The youth who knew of one dead or sick of AIDS had almost 5 times more odds not to use condoms than those who did not have the knowledge with a significant relationship between knowledge and condom use ($p=0.012$). Similarly, the youth with perception of risks HIV infection had 2 and half odds of not using condoms compared to those without perception of risks and the relationship is highly significant ($p=0.004$). There is also no significant relationship between never having heard of HIV/AIDS and condom use ($p=0.8257$) because hardly no one had not heard of the epidemic.

Willingness to test for HIV was regressed on the selected variables and the results are shown in Table 7. It should be noted that because apart from sex and marital status all other variables indicated in Table 6 did not contribute to the model ($R=0.0000$), they have been excluded from Table 7. Results in Table

7 show that sex of respondents was significantly related with willingness to test for HIV at $p<0.05$ while marital status was not. Females had 2.6 odds to be unwilling to test than males, perhaps the former thought they were negative given their faithfulness to their sexual partners. The never married were 2.3 times less willing to test for HIV than the separated, divorced and widowed. In contrast, the married were most willing to test, perhaps they believed they were negative and needed to confirm it.

Recommendations

There is need for sensitizing youth both in and out of school on HIV/AIDS in Northern Uganda. Strategies for policy advice on how to tap the enormous potential of youth in war torn areas should be strengthened. Education is a powerful protective factor against HIV infection and should therefore be promoted. Also education provides youth with aspirations for their future, increases their expectations of future earnings, improves their ability to process health-related information and empowers them to make informed decisions. School-based programs can be effective in improving youth's knowledge of HIV/AIDS and reducing risky behavior. This implies that teachers should be sufficiently trained and encouraged to use interactive teaching methods and that they do not hesitate to address sexual matters explicitly. Furthermore, starting well-designed reproductive health education even before the onset of sexual activity prevents risky behavior and allows programs to reach adolescents who do not remain in school later on.

Youth should be involved in designing the interventions in order to assure relevance of programs to them. The success of youth-specific interventions often depends greatly on how the youth relate to their service providers and, in turn, how those providers and institutions succeed in empowering and integrating youth. A community-based study from Nepal confirms that interventions fostering active youth participation throughout planning and implementation shows improved youth reproductive health outcomes. Similarly the local governments, development partners, civil society organizations in the region should involve youth as early as possible.

Making health services more youth-friendly may lead to an increased use of facilities by young people in Northern Uganda. Many young people lack access to services such as condoms and voluntary counseling and testing (VCT). Often socially excluded or out-of-school youth are reluctant to go to a clinic, so services need to go to them where possible, such as in the workplace, job training programs, social venues, sports settings and in communities. Sensitizing health staff on young peoples' needs is critical to make sure they get the service package they need.

Targeted media and social marketing campaigns should be used in communities to improve young people's knowledge about HIV and AIDS.

Programs that use a mix of media show significant outcomes on HIV knowledge and skills as well as on condom use. Higher levels of program exposure increase the likelihood of behavior change.

Training peers to be positive role models can positively influence young peoples' behaviors, facilitate access to and create trust among young people. Peer education and other community-based programs are especially effective in reaching out-of-school youth and other groups who are particularly vulnerable to infection. The most notable impacts have been in increasing HIV/AIDS awareness and in improving some behavioral indicators such as increased condom use at last sex. Similar programs like the Peru peer promotion program, Nigeria project with youth serving organizations and peer education program in Cameroon have succeeded in improving the behaviour of youth in those countries.

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Table 1: Percent distribution of respondents by background characteristics

Background Characteristics	Males (n=370)	Females (n=540)	Both sexes (n=910)
Age group			
15-19	47.8	40.0	43.9
20-24	52.2	60.0	56.1
Residence			
Urban	75.8	41.4	58.6
Rural	24.2	58.6	41.4
Sub-Region			
North East	13.6	8.7	11.2
North Central	38.4	45.2	41.8
West Nile	48.0	46.1	47.0
Education			
None	5.6	18.9	13.2
Primary	39.1	47.0	43.7
Secondary	37.3	23.5	29.4
Tertiary	18.0	10.6	13.7
Religion			
Catholics	49.1	47.4	48.3
Protestants	36.0	33.2	34.4
Moslems	14.9	19.4	17.5
Occupation			
Peasants	21.1	52.7	48.1
Business	30.5	19.9	20.2
Clerical work	18.2	16.6	17.4
Casual work	30.2	10.8	20.5
Marital status			
Never married	16.0	3.3	9.8
Currently married	62.5	70.8	66.7
Cohabiting	14.6	18.8	16.7
Separated/Divorced/widowed	6.90	7.1	6.8
ALL	**100.0**	**100.0**	**100.0**

Table 2: Percentage of respondents with knowledge on HIV/AIDS by sex.

Variables	Males	Females	All	p-value
Heard of AIDS				
Yes	100.0	96.7	97.7	1.000
No	0.0	3.3	2.3	
Know someone with AIDS				
Yes	92.2	81.5	86.0	0.002
No	7.8	18.5	13.0	
At Risk to HIV infection				
Yes	71.7	62.6	65.5	0.63
No	28.3	37.4	34.5	

Table 3: Percentage of respondents who have protected themselves or their partners against HIV by background characteristics

Background variables	Abstinence	Faithfulness	Protected sex	Nothing	p-value
Age group					
15-19	0.0	51.0	32.2	16.9	0.802
20-24	5.1	65.4	21.3	8.2	
Sex					
Male	1.2	45.3	37.6	15.9	0.973
Female	3.7	69.1	19.3	7.9	
Residence					
Urban	10.1	51.3	35.6	3.0	0.580
Rural	8.5	69.5	20.4	1.6	
Education					
None	21.1	48.5	18.4	12.0	0.000
Primary	7.8	63.4	23.5	5.3	
Secondary	2.8	64.1	25.1	4.0	
Tertiary	1.8	65.0	25.2	8.0	
Sub-Region					
North East	4.4	66.9	26.7	3.0	0.12
North Central	2.7	46.7	39.6	11.0	
West Nile	5.7	70.4	22.6	1.3	
Religion					
Catholics	6.5	65.1	25.7	1.3	0.881
Protestants	8.8	60.8	27.1	4.7	
Moslems	11.9	55.5	30.1	2.5	
Occupation					
Peasants	7.7	75.1	16.0	1.2	0.005
Business	6.6	54.9	37.0	1.5	
Clerical work	5.2	60.3	31.5	4.0	
Casual work	16.5	49.2	31.3	3.0	
Marital status					
Never married	1.0	36.9	58.6	3.5	0.002
Currently married	6.9	69.2	20.6	3.3	
Cohabiting	13.2	46.7	34.6	5.5	
Separated/Divorced/widowed	16.9	43.9	20.2	19.0	
ALL	6.7	63.7	24.2	5.4	

Table 4: Percentage of youth with mean number of sexual partners by backround characteristics

Age group	Males			Females		
	% who had sex in the past 12 months	% who had 2+ partners in the past 12 months	Mean no. of life time sexual partners	% who had sex in the past 12 months	% who had 2+ partners in the past 12 months	Mean no. of life time sexual partners
15-19	51.6	26.1	3.2	45.4	6.5	1.5
20-24	84.3	36.8	5.4	81.7	3.2	1.8
Residence						
Urban	64.3	32.1	7.1	57.4	7	2.3
Rural	73.6	26.5	5.2	72.4	3.9	2.2
Education						
None	86.9	25.1	6.8	87.6	2.9	2.1
Primary	74.9	28.3	7	74.8	4.1	2.2
Secondary+	63.3	30.6	7.1	66.2	5.7	2.2
Sub-Region						
North East	75.1	15.7	3.3	77.8	7.9	1.6
North Central	78.3	23.2	5.9	87.3	20.4	1.7
West Nile	62.1	24.1	4.7	65.7	6.7	1.6
Marital status						
Never married	63.4	31.5	6.8	41.9	20.0	1.4
Currently married	99.1	27.5	8.5	98.0	2.1	1.7
Separated/Divorced/widowed	31.8	24.4	3.2	22.5	10.7	2.5
All	**69.9**	**27.1**	**5.7**	**67.6**	**7.8**	**1.9**

Table 5: Condom use at last sex among those who had sex in the 12 months preceding the survey

Age group	Used Condoms	p-value
15-19	32.2	0.623
20-24	19	
Sex		
Male	37.6	0.000
Female	14.3	
Residence		
Urban	35.6	0.001
Rural	14.8	
Education		
None	9.4	0.000
Primary	19.4	
Secondary	26.1	
Tertiary	39.4	
Sub-Region		0.780
North East	23.7	
North Central	33.6	
West Nile	17.9	
Religion		
Catholics	13.1	0.008
Protestants	29.7	
Moslems	34.1	
Occupation		
Peasants	12.1	0.000
Business	29.9	
Clerical work	37.3	
Casual work	21.7	
Marital status		
Never married	40.2	0.000
Currently married	13.4	
Separated/Divorced/widowed	20.7	
ALL	**24.9**	

Table 6: Results of Logistic Regression of condom use at last sex on selected variables

Variable	B	Sig	R	Exp(B)
Age				
15-19**	0.0000	-	-	1.0000
20-24	0.7700	0.0057	0.1054	2.1597
Sex				
Male**	0.0000	-	-	1.0000
Female	1.1806	0.0001	0.1887	3.4550
Residence				
Rural**	0.0000	-	-	1.0000
Urban	1.1953	0.0007	0.1433	3.3861
Education				
Secondary**	0.0000	-	-	1.0000
None	0.9132	0.0435	0.0517	2.4763
Primary	0.7653	0.0137	0.0875	2.1654
Religion				
Moslem**	0.0000	-	-	1.0000
Catholic	0.6543	0.0621	0.0521	1.9346
Protestant	0.3150	0.3227	0.0000	1.2901
Occupation				
Business**	0.0000	-	-	1.0000
Peasant	0.9168	0.0112	0.8300	2.5236
Clerical work	0.2548	0.5349	0.0000	1.3785
Casual Labor	0.7845	0.0125	0.0849	2.3186
Marital status				
Other**	0.0000	-	-	1.0000
Never married	0.3750	0.4750	0.0000	1.4691
Married	0.6741	0.0279	0.0721	1.9589
Knowledge of one dead or sick with AIDS				
No**	0.0000	-	-	1.0000
Yes	1.3575	0.0122	0.0932	4.7194
Perception of risks to HIV infection				
No**	0.0000	-	-	1.0000
Yes	0.8257	0.0041	0.1097	2.4066
Heard of HIV/AIDS				
No**	0.0000	-	-	1.0000
Yes	-1.2196	0.2643	0.0000	0.2417

Key

**= Reference category   B- Logistic co efficient

R= partial correlation co efficient   Exp (B) = Odds ratio

Table 7 Results of logistic regression of willingness to test for HIV on selected variables.

Variable	B	Sig	R	Exp(B)
Sex				
Male**	-	-	-	-
Female	0.9388	0.0075	0.1211	2.567
Marital status				
Never married	0.8245	0.1356	0.0401	2.2731
Married	-0.2745	0.4356	0.0000	0.8123
Separated/divorced/widowed**	-	-	-	-

Key
**= Reference category
B- Logistic co efficient
R= partial correlation co efficient
Exp (B) = Odds ratio