

HIV risk sexual behaviors among teachers in Uganda

Lillian Ayebole,^{1,2} Lynn Atuyambe,³
William Bazeyo,³ Erasmus Otoloro Tanga²

¹Makerere University School of Public Health/Centre for Disease Control and Prevention (CDC) HIV/AIDS Fellowship Program; ²World Vision Uganda-SPEAR Project; ³Makerere University School of Public Health, Uganda

Abstract

Recent studies reveal that teachers are more likely to engage in high-risk sexual behavior compared to the rest of the adult population. Yet the education sector could be a major vehicle for imparting knowledge and skills of avoiding and/or coping with the pandemic. This study set out to establish HIV risk behaviors among teachers in Uganda, to inform the design of a behavior change communication strategy for HIV prevention among teachers. It was a cross sectional rapid assessment conducted among primary and secondary school teachers in Kampala and Kalangala districts, in Uganda. A total of 183 teachers were interviewed. HIV risk behavior, in this study was measured as having multiple sexual partners and/or sex with a partner of unknown status without using a condom. We also considered transactional/sex for favors and alcohol use as exposures to HIV risk behavior. Odds ratios (OR) and their corresponding 95% confidence intervals (CI) were calculated. All data analysis was performed using SPSS version 17.0 and EPI Info Version 3.5.1. Forty five per cent of teachers reported having multiple concurrent sexual partners in the last three months, of these, only 24% acknowledged having used a condom at their last sexual encounter yet only 9.8% knew their partners' HIV status. Teachers below 30 years of age were more likely to have two or more concurrent sexual partners (OR 2.6, CI 1.31-5.34) compared to those above 30 years. Primary school teachers were less likely to involve with partners of unknown HIV status compared to secondary school teachers (OR 0.43, CI 0.19-0.97). Teachers aged below 30 years were also more likely to engage with partners of unknown HIV status compared to those above 30 years (OR 2.47, CI 1.10-5.59). Primary teachers were also less likely to have given or received gifts, money or other favors in exchange for sex (OR 0.24, CI 0.09-0.58). Teachers engage in risky sexual behaviors, which lead to HIV infection. There is need to promote individual risk perception, condom use and reduction in sexual

partners. Also to encourage partners to know each other's status, and teachers to avoid risky situations or carefully negotiate such situations.

Introduction

HIV infection is invariably the result of human behavior. Change in behavior is essential to curbing the spread of infection.¹ In all cases where national epidemics have been reversed, broad-based behavior changes were central to success. Teachers in Uganda are regularly singled out as being a *high-risk group* with respect to HIV/AIDS.^{2,3} It is commonly suggested that teachers are more likely to engage in high-risk sexual behavior compared to the rest of the adult population.⁴ Yet the education sector could be a major vehicle for imparting knowledge and skills of avoiding and/or coping with the pandemic.

Teachers are said to be particularly *prone* or vulnerable to HIV infection because the teaching profession is relatively young with a high majority in the highly sexually active ages. This means that the large majority of teachers are in the highest HIV prevalence age cohorts.⁵ Also, the teaching profession is female dominated, yet overall HIV prevalence rates among the adult population are generally significantly higher among females.^{5,6} These reports also revealed that, teachers are relatively well off especially when posted in rural areas (compared to the local population), and in the case of male teachers, it is alleged that sizeable numbers have sexual relations with their students.^{5,6} The Ministry of Education and Sports (MoES) also identifies structural drivers of the epidemic among teachers as high level of stigma and discrimination, teacher transfers which separates teachers from their spouses or regular sexual partners hence increases the likelihood of starting new relationships that may predispose them to HIV infection.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) reported that school teachers in Sub Saharan Africa (SSA) are being and will continue to be particularly badly affected by the AIDS epidemic.^{3,7} To date, UNAIDS acknowledges that HIV is having a devastating effect on the already inadequate supply of teachers in African countries. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), teacher turnover and attrition are becoming increasingly chronic problems in SSA as a result of HIV-related illness and death. UNESCO adds that, in SSA alone, the region most affected by the epidemic, 1.6 million additional primary teachers will be required by 2015 if the trend in the spread of

Correspondence: Lillian Ayebole, Makerere University School of Public Health CDC HIV/AIDS Fellowship Program, Plot 30, Yorkshire Avenue, Kololo, Kampala, Uganda.
Tel. +256.788.357142.
E-mail: ayelillian@yahoo.co.uk

Key words: teachers, HIV risk behavior.

Acknowledgements: we extend our thanks to the School of Public Health CDC HIV/AIDS Fellowship that funded the study, Ministry of Education and Sports for authoring teachers to participate and the teachers who participated as respondents.

Contributions: LA 1 conceptualized and designed the study protocols and carried out the field study work; analyzed and interpreted the data; LA 2, WB and EOT guided LA 1 through the entire process of designing the study protocols, fieldwork, data analysis and critically reviewed the findings. All authors read and approved the final manuscript.

Conflict of interest: the authors declare no potential conflict of interest.

Received for publication: 22 May 2013.

Revision received: 17 October 2013.

Accepted for publication: 7 November 2013.

This work is licensed under a Creative Commons Attribution NonCommercial 3.0 License (CC BY-NC 3.0).

©Copyright L. Ayebole et al., 2014

Licensee PAGEPress, Italy

Journal of Public Health in Africa 2014; 5:350

doi:10.4081/jphia.2014.350

the epidemic does not change.⁸

While the role of education and educators in HIV prevention efforts has been recognized as a key factor in tackling the HIV epidemic, less attention has been paid to mitigating the impact among educators/teachers themselves. The apparent vulnerability of teachers may be due to their status and conditions of service. As a group they are better educated than the general population, their income is higher, and their mobility is greater. The study set out to establish HIV risk behaviors among teachers in Uganda. It was conducted as a rapid assessment to provide a baseline for the design of a behavior change communication (BCC) strategy for teachers in Uganda for HIV prevention.

Materials and Methods

Study design

This was a cross sectional rapid assessment conducted in September 2011 among primary and secondary school teachers in Kampala and Kalangala districts, in Uganda. This study was

primarily designed to inform the development of an HIV BCC strategy for teacher for HIV prevention. The study was done under the supporting public sector workplaces expand action and responses to HIV/AIDS (SPEAR) a World Vision, USAID/PEPFAR funded project.

The study population was teachers in central region schools that had received SPEAR intervention. This region includes the districts of; Kampala, Kalangala, Kayunga, Kamuli, Kaliro, Mukono, Bugiri, Luwero, Nakaseke, Mpigi, Wakiso, Jinja, Iganga, Namutumba and Mayuge. Kampala and Kalangala districts were purposefully sampled. Kampala was purposefully sampled because it was the district with *highest* SPEAR interventions (had the highest number of teachers trained as behavior change agents) while Kalangala was sampled not only because it had received less SPEAR interventions but also because it was unique of all districts being an Island characterized by fishing communities. Ten schools were randomly sampled in each district, five primary and five secondary. Teachers (respondents) at the school were interviewed on availability. We did not sample for respondents since some teachers would be teaching as others are off duty. A total of 183 respondents were interviewed.

Sampling and data collection procedures

We selected 2 districts from central region based on, the number of schools that had a teacher who had been trained by SPEAR as a behavior change agent/peer educator (level of intervention). One was for high-intervention and the other for low-intervention an equal

number of primary and secondary teachers was considered. Ten schools (five primary and five secondary) in each of the districts were randomly sampled from all the school that had received intervention. In each school sampled ten teachers were interviewed depending on who was available. Only teachers consenting were interviewed and refusals were replaced where possible. A semi-structured questionnaire was used. The questionnaire had four sections; background socio-demographic information, Knowledge and Attitude in regard to HIV and teachers' behaviour and Practices and behavior among teachers and specific questions on alcohol use. Some of the questions used were adopted from an earlier survey among public sector workers conducted by SPEAR.

HIV risk behavior, in this study was measured as having multiple sexual partners and/or sex with a partner of unknown status without using a condom. Whereas all respondents were asked what they think are the risky behaviors among teachers, only those who had had sex in last three months were asked of the number of sexual partners and questions regarding condom use at last sex, whether they knew the partners' HIV status, likelihood of partner being HIV positive, alcohol use at last sex and whether they had given or received gifts, money or transfer favors, promotional favors in exchange for sex. The act of giving or receiving gifts, money or transfer favors, and promotional favors in exchange for sex in this study is referred to as transactional sex.

Two female and two male graduates with experience in data collection were used to conduct the interviews. English was used as the language for the interviews since teachers are

supposed to use English as a medium of instruction in school. The research assistants were trained for one day and the contents of the training were objectives of the study and methods of data collection.

Data management and analysis

The filled in questionnaires were entered into the computer using Epi Info version 3.5.1 and then exported to SPSS version 17.0 for data analysis. Frequency distributions were run to better understand the variables. Multiple sexual partnerships, low condom use, ignorance of partners' HIV status, transactional/sex for favors and alcohol consumption were used as risk factors. HIV risk behavior, in this study was measured as having had multiple sexual partners and/or sex with a partner of unknown status without using a condom. In this study, multiple sexual partnerships were defined as two or more partners in the last three months. Whereas all respondents were asked what they think are the risky behaviors among teachers, only the sexually active were asked of the number of sexual partners in the last three months. Only respondents with multiple sexual partners were asked whether they used a condom with the most recent partner and whether they knew their partners' HIV status. Transactional sex, in this study defined as sexual acts that are performed in exchange for money, gifts, or transfer favors, promotional favors among others. Respondents were asked whether they think teachers engage in transactional sex and if they had ever given or received money or favors like transfer, promotion, or gifts in exchange for sex. The respondents were asked whether alcohol use impairs ones judgment.

Table 1. Social demographic characteristics of respondents.

Characteristics	Primary n=114		Secondary n=69		Total	Percentage
	Number	Percentage	Number	Percentage		
Sex						
Male	45	39.5	41	59.4	-	-
Females	69	60.5	28	40.6	183	100
Marital status						
Married	84	73.7	47	68.1	-	-
Never married	23	20.2	18	26.1	-	-
Separated	4	3.5	3	4.3	-	-
Widowed	3	2.6	1	1.4	183	100
Age						
<=30	38	33.3	29	42.0	-	-
>=31	76	66.7	40	58.0	183	100
Education level						
Grade 2	18	15.8	0	0.0	-	-
Grade 3	37	32.5	0	0.0	-	-
Grade 4	0	0.0	2	2.9	-	-
Diploma	50	43.9	11	15.9	-	-
Graduate	7	6.1	56	81.2	183	100
District						
Kampala	49	43.0	49	71.0	-	-
Kalangala	65	57.0	20	29.0	183	100

Odds ratios (OR) and their corresponding 95% confidence intervals (CI) were calculated. All data analysis was performed using SPSS version 17.0 (IBM Corp., Armonk, NY, USA) and Epic Info version 3.5.1 (Centers for Disease Control and Prevention, DeKalb County, GA, USA).

Results

Background characteristics of respondents

A total of 183 teachers were interviewed in Kampala and Kalangala districts. A number of 98/183 (53.6%) were from Kampala, 114/183 (62.3%) were primary school teachers. Table 1 summarizes the background characteristics of respondents. Of all the respondents, 71.6% were married, 53.0% were females and 63.4% were more than 30 years old. With regard to

education level, most of the primary school teachers were diploma holders while the secondary school teachers were mostly graduates. Kalangala had the smallest (20/69) number of secondary school teachers. In terms of sex distribution of the respondents by school category, there were 45 male respondents from primary school compared to 41 males from secondary schools. Most females were from primary schools, a total number of 69 compared to 28 females from secondary schools. Most of the teachers from both primary and secondary schools were aged above 30 years.

Risk behaviors among teachers

Multiple sexual partners

In this study, only 6.0% (11/183) reported not having sex in the last three months. Respondents who had had sex in the last three months were asked about their sexual relationships and particularly number of sexual partners. About an equal percentage of primary

and secondary school teachers interviewed reported having multiple concurrent sexual partners (46.4%, 44.9%). Teachers aged below 30 years were found to be more likely to have two or more sexual partners compared to those who were 31 years and above (OR 2.64, CI 1.31-5.34) (Table 2).

Limited condom use

Regarding condom use, all respondents were asked whether they think condom use would prevent one from HIV infection. It was revealed that teachers 59.6% and 55.1% of primary and secondary school teachers respectively think that condoms prevent HIV infection. Of the respondents who reported multiple sexual partnerships in the last three months, only 24% acknowledged having used a condom at their last sexual encounter although this was not statistically significant across all categories; age, sex and school category. A percentage of 24.4% of males did not use condom with a partner they considered regular or their spouse.

Table 2. HIV risk behaviors among teachers by age, sex and school category.

Risky behavior	Age		OR (CI)	Sex		OR (CI)	School category		
	<=30 N=67	>=31 N=116		M N=86	F N=97		Primary N=114	Secondary N=69	OR (CI)
Multiple partnerships									
Have two or more partners (concurrent)									
Yes	29	26	2.64	39	45	0.96	53	31	1.07
No	38	90	(1.31-5.34)*	47	52	(0.51-1.79)	61	38	(0.56-2.03)
Condom use									
Do you think condoms protect one from HIV infection?									
Yes	37	69	0.84	48	58	0.85	68	38	1.21
No	30	47	(0.44-1.61)	38	39	(0.45-1.60)	46	31	(0.63-2.31)
Did you use a condom during your last sexual encounter (not with spouse)?									
Yes	18	26	1.27	21	23	1.04	31	13	1.61
No	4	90	(0.60-2.69)	65	74	(0.50-2.16)	83	56	(0.73-3.57)
Ignorance of partners' HIV status									
Do you think it is a risky behavior?									
Yes	20	31	1.17	24	27	1.00	28	23	0.65
No	47	85	(0.51-2.39)	62	70	(0.50-2.02)	86	46	(0.32-1.32)
Knowledge of HIV status of partner									
Know	19	16	2.47	16	19	0.94	16	19	0.43
Don't know	48	100	(1.10-5.59)*	70	78	(0.42-2.09)	98	50	(0.19-0.97)*
Transactional sex									
Do you believe teachers get involved in transactional sex?									
Yes	10	32	0.46	20	22	1.03	24	18	0.76
No	57	84	(0.19-1.07)	66	75	(0.49-2.18)	90	51	(0.35-1.61)
Have you ever either received or given gifts, money or other favors in ex for sex?									
Yes	14	18	1.44	18	14	1.57	10	20	0.24
No	53	98	(0.62-3.33)	68	83	(0.68-3.62)	104	49	(0.09-0.58)*
Alcohol use									
Ever taken alcohol									
Yes	30	67	0.59	47	50	1.13	64	33	1.40
No	37	49	(0.31-1.14)	39	47	(0.61-2.11)	50	36	(0.73-2.66)
Do you believe that alcohol impairs one's judgment?									
Yes	36	68	0.82	49	55	1.01	73	31	2.18
No	31	48	(0.43-1.57)	37	42	(0.54-1.90)	41	38	(1.14-4.21)*

OR, odd ratios; CI, confidence interval. *Statistically significant.

Knowledge of partners' HIV status

In this study, the respondents were asked whether they knew their partners HIV status. Only 15/172 sexually active respondents knew their partners' HIV status. Primary school teachers were less likely to involve with partners of unknown HIV status compared to secondary school teachers (OR 0.43, CI 0.19-0.97) and teachers aged below 30 years were also more likely to engage with partners of unknown HIV status compared to those above 30 years (OR 2.47, CI 1.10-5.59) (Table 2).

Transactional sex/sex for favors

In all for primary and secondary, 20% of male teachers and 14.4% of female teachers have ever given or received money or favors like transfer, promotion, or gifts in exchange for sex. Primary school teachers were less likely to have involved in transactional sex compared to secondary school teachers (OR 0.24, CI 0.09-0.58) (Table 2).

Alcohol use

Among primary school teachers, 64% reported taking alcohol and 45% of secondary teachers interviewed reported taking alcohol in the last three months. The respondents were asked whether alcohol use impairs ones judgment and primary teachers were more likely to acknowledge that alcohol impairs one's judgment compared to secondary school teachers (OR 2.18, CI 1.14-4.21) (Table 2).

Discussion

Previous studies have established several behavioral factors, which place individuals at a higher risk of contracting HIV. The Uganda HIV modes of transmission and prevention response analysis,⁹ evaluated the most prevalent drivers of HIV in Uganda based on data from two population-based longitudinal cohort studies as, multiple sexual partners and discordance, lack of condom use, non disclosure of HIV status, cross generational sex and alcohol and drug use among others. The MoES HIV Prevention sector strategic plan 2011 also points out some of the risky behaviors that put teachers at risk of HIV infection as long distance partnerships which lead to multiple sexual partners, low condom use, sex for favors among others.⁵ The discussion is built on these findings with the aim of understanding which of these behaviors are most common among teachers.

Studies in multiple Sub-Saharan African countries have shown that married women increasingly have higher rates of HIV infection than sexually active unmarried women.¹⁰ Findings are associated with more regular sex-

ual activity, decreased condom use, and the lack of the ability to abstain from sex once married, all exacerbated by women's increased biological susceptibility. A separate study in Uganda showed that men were twice as likely as women to bring HIV infection into a marriage through extra-marital sexual behaviour,¹¹ thus married women are in a higher risk category for HIV infection. The Modes of Transmission Assessment (MOTA) found that, within the general population, the largest proportion (43%) of new infections occurs within *mutually monogamous* heterosexual couples. In this study, multiple sexual partnerships were significantly more common among men and women living away from their homes. However, it was also found out that primary school teachers were more likely to engage in multiple sexual relations than their counterparts in secondary schools.

Other studies by MoES have also suggested that multiple sexual partnerships are common among teachers involving learners, fellow teachers, workers, communities and education managers for cash, promotion, and favors relating to transfers among others.¹²

MoES studies among teachers reveal a very low consistency in condom use with non-regular sexual partners.¹² However, teachers do believe that consistent and correct use of condoms is effective in preventing HIV transmission just as was the finding in this assessment. Low consistent condom use especially among teachers with non-regular sexual partners puts them at risk of HIV.¹² In this assessment condom use varied with the type of partner and one was more likely not to use a condom if the partner was a consistent partner or a spouse. The SPEAR/RTI follow up study; assessing drivers of HIV infection among targeted public sector workers in the Republic of Uganda revealed that, while the acceptability of condom use for single men and women was high at 73 percent and 71 percent respectively, it was low for married people.¹³ This finding is consistent with this rapid assessment.

The SPEAR/RTI assessment revealed that among married public sector workers, 50% said infection was very unlikely, while 42% said they were unsure. Among unmarried partners, 27% said their partners were unlikely to be infected, 60% were unsure, and 14% felt it was likely that their partners were infected.¹³ This study revealed that many of the public sector workers including those from MoES particularly teachers are still ignorant of their partners' HIV status. Through sero-testing, the 2004/05 Uganda HIV sero behavioral survey found that in couples where one or more partner tested positive, almost 50% were discordant and unaware of their partner's HIV status, and often of their own status.¹⁴ In this study, the respondents were asked whether they knew their partners HIV status. Only 15/172 sexually active respon-

dents knew their partners' HIV status. However, most of the respondents acknowledged that ignorance of partners' HIV status increases the risk of getting HIV.

Studies have shown evidence of reported transaction sex among teachers.^{12,15} Although the percentage reported transactional sex seems small at 1.6 percent, it is said to be undesirable in the education sector especially among teachers. Transactional sex, defined as sexual acts that are performed in exchange for money, gifts, or transfer favors, promotional favors among others. According to the Uganda demographic and health survey 2006, transactional sex accounted for 22% of new infections in Uganda in 2005.¹⁶ Teachers are often transferred and work away from their homes, move without their families, have poor housing facilities and above are poorly paid. It is urged that teachers therefore engage in transactional sex and sex for favors to achieve some of their desires.

Alcohol and drug use during sexual activity is known to affect the decision to engage in higher risk sexual acts, as well as the decision to use a condom.¹³ Many are also engaged in alcohol consumption that exposes them to unplanned sex with non-regular partners (MoES, 2011).

Conclusions

The rapid assessment revealed that, indeed teachers engage in risky sexual behaviors and the planned intervention to design a BCC strategy for teachers in Uganda is timely. There is need to promote individual risk perception, condom use and reduction in sexual partners. Also to encourage partners to know each other's status, and teachers to avoid risky situations or carefully negotiate such situations.

Ethical considerations

Ethical approval was sought from the Makerere University School of Public health (MaKSPH) higher degrees, research and ethics committee. Further clearance was obtained from the Uganda National Council of Science and Technology (UNCST) the national body mandated to clear all research work. Written consent was obtained from all respondents before the interview started.

Limitations of the study

Teachers in Kampala City were selected to represent the urban teachers' responses, however not all urban settings have similar teacher standards. Some urban settings too are way below the city standards. Kalangala District represented a rural district; this district is a

composed island with many contributing factors to HIV risk that may not be in other rural districts.

References

1. Potts MH, Kirby D. Public health. Reassessing HIV prevention. [Abstract]. *Science* 2008;320:749-50.
2. Bennell P. The impact of the AIDS epidemic on teacher mortality in sub-Saharan Africa. *J Develop Stud* 2005;41:440-66.
3. Clarke DJ. Heroes and villains: teachers in the education response to HIV. Paris: International Institute for Educational Planning; 2008.
4. World Vision, Uganda. Access and utilisation of HIV/AIDS prevention, care and treatment services by public sector workers in the ministries of local government, internal affairs and education and sports. A baseline report. SPEAR; 2009.
5. Ministry of Education and Sports. Education and sports sector HIV prevention strategic plan 2011-2015. Uganda: Ministry of Education and Sports; 2011.
6. Ministry of Education and Sports. Assessment of the Impact of HIV/AIDS on the Education Sector in Uganda. Uganda: Ministry of Education and Sports; 2008.
7. UNAIDS. The impact of AIDS on people and societies. In: 2006 Report on Global AIDS Epidemic, Chapter 04. UNAIDS; 2006.
8. UNESCO. Comparing education statistics across the world. *Global Education Digest*: UNESCO Institute for Statistics; 2006.
9. Uganda AIDS Commission and UNAIDS. Uganda HIV prevention response and modes of transmission analysis. Uganda: Uganda AIDS Commission; 2009.
10. Clark S. Early marriage and HIV risks in Sub-Saharan Africa. *Stud Fam Plan* 2004;35:149-60.
11. Carpenter LM, Kamali A, Ruberantwari A, et al. Rates of HIV-1 transmission within marriage in rural Uganda in relation to the HIV sero-status of the partners. *AIDS* 1999;13:1083-9.
12. Ministry of Education and Sports. Combating HIV/AIDS in Uganda, work place projects in Arua, Butaleja and Mpigi. Uganda: Ministry of Education and Sports; 2007.
13. World Vision International and Research Triangle Institute (RTI) International-SPEAR Project. Assessing drivers of HIV infection among targeted public sector workers in the Republic of Uganda. Research Triangle Institute (RTI) International; 2011.
14. Ministry of Health (MOH) [Uganda] and ORC Macro. Uganda HIV/AIDS Sero-behavioural Survey 2004-2005. Calverton, MA: Ministry of Health and ORC Macro; 2006.
15. Kigongo SW, Tamale J, Lule JC, Wabwire-Mangen F. Knowledge, attitude and practice about sexually transmitted diseases among University students in Kampala. *Afr Health Sci* 2001;1:1.
16. Uganda Bureau of Statistics and Macro, Inc. Uganda demographic and health survey 2000-2001. UBOS/Macro Inc. 2006; Maryland, USA: Calverton.

Non-commercial use only