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University of Zimbabwe

Awareness of the risks of HIV infection by Zimbabwean urban and rural high school attendees

EN SIBANDA, T MLINGO, N CHIKOMO, K KAHOBA, A KARETU, V KHOSA, N. LUKHELE, CC
MAKWINDI, J MUFANDAEDZA

Abstract

Objectives: The purpose of this report was to investigate the awareness by high school attendees of risky behaviour likely to lead to sexually transmitted infections (STIs) including HIV/AIDS and to assess their preparedness to prevent or obviate the consequences.

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Design: Cross sectional study.

Settings: A small town located 100 km south of the Zimbabwean capital, Harare and in communal and commercial farming areas within a 50 km radius of the town.

Methods: With the permission of school authorities, a group of second year medical students from the University of Zimbabwe on rural attachment administered an anonymous questionnaire to teenagers attending four high schools in the study area. Specific questions to determine whether the teenagers were sexually active and if they used any protection during sex were incorporated into a general and environmental health questionnaire.

Results: A total of 241 teenagers, 153 boys and 89 girls from all four schools completed the questionnaire. The percentages of sexually active boys (48%) and girls (49%) were similar. The majority had heterosexual preferences, 4.6% boys were homosexual. Half (50%) of the 16 year old pupils were sexually active. There were more urban than rural school attendees who reported personal knowledge of someone with HIV or AIDS. Condom use was low.

Conclusion: We found that half of the 16 to 19 year old students were sexually active. Rural school attendees were more likely to be sexually active and less likely to practice safe sex. We conclude that the risk of sexually transmitted diseases (including HIV) amongst these teenagers is significant and recommend that, there is a need to design a group targeted awareness programme in order to obviate sexually transmitted diseases including HIV.

Introduction

The sub-Saharan region of Africa is plagued by the human immunodeficiency virus (HIV) pandemic. The HIV is transmitted through unprotected sex. Although persons aged 19 to 45 bear the brunt, no age group is spared. The greatest percentage increase in infected persons has been reported in the 15 to 19 year old age bracket. The risk of infection with sexually transmitted diseases including HIV is only one of the many risks that teenagers face as they move from childhood to adulthood.

Recent studies indicate that in Zimbabwe the knowledge that teenagers have about sexually transmitted diseases including HIV is low.¹ The increase in unwanted teenage pregnancies in the Zimbabwe and the Southern African region suggests unprotected teenage sex.² The teenage girl, in addition faces the risk of unwanted pregnancy and disrupted education. Against this background international agencies are estimating that half the teenagers will die of AIDS in this geographical region.³ The determinants of the risk of HIV infection include a past history of STI, an increased number of sexual partners and irregular use of condoms.⁴ Cognisant of these risks, Zimbabwean researchers have, in the past decade recommended the incorporation of reproductive health programs in schools.⁴⁻⁶ Some of the perceived benefits of such an intervention would be to equip the teenager with the knowledge of what constitutes risky sexual behaviour and thus enable them to make informed choices on whether and when to become sexually active. One of the objectives of our survey was to assess the impact of these interventions on teenage risky behaviour.

The study of behaviour patterns that are likely to increase the risk of sexually transmitted diseases offers some insights into the dynamics of the epidemic and thus enables the design and implementation of measures to combat the

epidemic. Significant changes in teenager risk behaviour can directly impact on the course of the epidemic. A majority of them will become parents in the next five years and if infected are likely to pass the infection to their offspring. Apart from the recognized risks associated with unwanted pregnancies, young women are at risk of contracting and transmitting STIs including HIV. Efforts to combat the epidemic will succeed if reinforced with an understanding of risk behaviour patterns.

Teenagers attending high schools were, therefore, investigated as crude surrogates for the population from which they were drawn. It is hoped that the identification of behaviour patterns within any group that is at risk of the infection will assist policy makers in designing and implementing targeted prevention strategies. These should inevitably include behaviour modifying interventions.

Materials and Methods

A group of second year, male medical students from the University of Zimbabwe on rural attachment administered an anonymous questionnaire to teenagers attending four high schools in the study area. The questionnaires were administered during classes. The general and environmental health questionnaire included questions that specifically asked the teenagers if they were sexually active and whether they knew about or had used any protection during sex. The questionnaire was not pre-tested. The responses obtained are the subject of this report.

The demographic profile of the respondents was established by extracting the ages, gender and schools attended from the questionnaires. We then analysed the numbers, ages and gender of the respondents and established what schools they attended. We also sought to establish whether the respondents knew of anyone who was infected with HIV in order to determine whether this personal

knowledge had any influence on their sexual risk behaviour. The impact of this knowledge was crudely measured by the awareness of and use of condoms.

Statistics.

Responses were analysed by the InStat Statistical software package.

Results

The questionnaire was completed by a total of 241 teenagers who attended schools in urban (n=102) or rural schools (n=133). Rural school attendees included those who came from rural, communal or large-scale commercial farming areas. There were almost twice as many boys (n=153) as girls (n=89). The ages ranged from 16 to 20 years (Table I).

Table I: The distribution of sexually active high school attendees by age and gender.

Age (years)	Total numbers	Male	Female
16	29/58 (50%)	16/28 (57%)	13/30 (43%)
17	43/91 (47%)	22/49 (42%)	23/42 (55%)
18	28/66 (42%)	21/50 (42%)	7/16 (48%)
19	11/18 (61%)	10/18 (55%)	1/1 (100%)
20	4/8 (80%)	4/8 (50%)	-
Totals	115/241 (48%)	74/153 (48%)	44/89 (49%)

Sexual activity amongst the teenagers.

One hundred and fifteen (48%) of the pupils were sexually active. This number included as many boys (48%) as girls (49%) (Table I). Although there were no overall gender differences, more rural (52%) than urban (44%) school attendees were sexually active ($p < 0.05$). Amongst the boys, 5.4% reported sexual experiences with male partners. Three of that number concurrently had female sex partners.

When we stratified the respondents by age, it became apparent that half of the 16 year old students were sexually active. This number included relatively more boys (57%) than girls (43%). A third of the 17 year old students were sexually active. In this age group there were relatively more boys (42%) than girls (26%). More than half (55%) of the 19 year old boys were sexually active. All the 20 year old schoolboys were sexually active.

The mean number of sex partners was 1.38 (range 1 to 10). The majority (67%) of the sexually active pupils reported a lifetime history of one partner. Of the remainder, 22% had two, while 10% had three or more lifetime sexual partners. Condom use was least amongst those with four or more lifetime partners.

We compared the numbers of sexually active rural or urban school teenagers (Table II). We found that more rural (52%) than urban (44%) school attendees were self-reportedly sexually active. These differences were particularly marked amongst the younger (16 and 17 year old) pupils. In the 17 year old group 26% more rural than urban students were sexually active.

Boys who had sex with males were aged 16 (n=3), 18 (n=3) and 19 years (n=1). All but one reported three to five same sex partners. In addition to male partners, three of these teenagers had female partners.

Table II: A comparison between the numbers of sexually active teenagers attending urban or rural high schools. The younger, 16 and 17 year old attendees of rural high schools were more likely to be sexually active. There was no statistically significant difference in the percentages of sexually active students who were aged 18 years or older. The number of 20 year old students was too small for statistical analysis.

Age (years)	Total Number	Urban	Rural
16	29/58 (50%)	6/13 (46%)	23/45 (51%)
17	43/91 (47%)	11/35 (31%)	32/56 (57%)
18	27/66 (46%)	18/38 (47%)	9/20 (45%)
19	11/18 (58%)	6/11 (55%)	5/8 (62%)
20	4/8 (44%)	4/5 (80%)	0/4 (0)
Totals	114/235 (49%)	45/102 (44%)	69/133 (52%)

Differences in gender.

The percentage of sexually active males was higher in the urban than rural school attendees in all groups except the 16 year olds. The percentage of sexually active 16 year old girls attending the urban schools was almost twice that of rural schoolgirls. Twice as many 17 year old and a third more 18 year old urban girls were sexually active. All the 19 and 20 year old urban schoolboys and 80% of the rural 19 year old boys were sexually active.

Table III: Percentages of sexually active male and female school attendees in urban and rural schools respectively. Apart from the 16 year olds, more urban than rural high school attendees were sexually active. More female rural school attendees aged 17 to 20 were sexually active than their counterparts attending urban schools.

Age (years)	Urban/Rural (Males)	Urban/Rural (Females)
16	33%/61%	67%/39%
17	75%/41%	25%/59%
18	78%/67%	22%/33%
19	100/80%	0%/20%
20	100%/0	0/0 (0)

Knowledge of someone who had HIV or AIDS.

We sought to determine whether the students had knowledge of STIs and whether they were practising safe sex. All but one could name STIs. Sixteen of the 23 sexually active rural and only two of five 16 year old urban school attendees reported no personal knowledge of someone with HIV or AIDS. Seven rural and three urban school attendees did not answer that question. Two 17 year old urban students were unaware of anyone with HIV/AIDS. Both did not engage in sex. By stark contrast, 42/56 (82%) 17 year old rural schools attendees did not know

anyone who had HIV or AIDS; half of them were sexually active and practised unsafe sex. In the 18 year old group, six rural and 10 urban students had no personal knowledge of anyone with HIV or AIDS. Half the numbers in each group were sexually active. Amongst 19 year old attendees of the rural schools eight out of nine did not know of anyone who was HIV infected. The one student who did was not sexually active. In the urban schools only two out of 11 did not know anyone who was infected. Both were sexually active, one of them had had 10 sexual partners.

Self-protection against sexually transmitted infections.

We were not permitted to include the question of condom use in classes attended by 16 and 17 year old teenagers in the urban school. Half of the 10 sexually active 19 and 20 year old students practised safe sex, one did not, four elected not to answer that question. In the rural schools 17/69 practised safe sex, 10 did not and the remainder opted not to answer the question. Four of those who had not used condoms did not know of anyone who had HIV or AIDS. There was no gender difference in the self-reported non-use of condoms.

Discussion

The data contained in this study show that there is sexual activity amongst teenagers attending rural or urban high schools. The data does not differ significantly from that observed in other sub-Saharan countries.^{3,7} The students practiced both heterosexual and homosexual sex. Relatively more 16 year old teenagers than the older age groups were sexually active. Although unknown, the number of those under 16 is likely to be significant. We found that students who did not know anyone who was infected with the virus that causes AIDS were more likely to be sexually active and less likely to have used protection and are, therefore, exposed to STIs including HIV. Knowledge, albeit by knowing of someone who is infected with HIV appeared to deter teenagers from commencing their sexual activity. Those who did were more likely to use protection. The early sexual activity debut raises questions regarding the timing of safe sex education. Starting at the legal age of sexual consent (16 years) is late.

The first cases of HIV in Zimbabwe were diagnosed in 1983 when all the questionnaire respondents were either toddlers or yet to be born. The interviewees have, therefore, potentially had a lifetime of exposure to the abstinence, mutual monogamy and safe sex messages. The low prevalence of both abstinence and protected sex shows that although these youngsters have grown up in the menacing shadow of AIDS, they may either have become oblivious to its devastating effects or numb to the abstinence and safe sex messages that are *hopefully*, beamed on to them.

Alternatively, the messages are not being appropriately targeted. This groups surrogates those currently 15, 14 or 13 and indirectly reflects the effectiveness of interventions targeted at those age groups. It would, therefore, be prudent to devise strategies to get these messages to all these groups if these efforts are to prevent STI related morbidity

and impact on the HIV incidence in a country where antiretroviral therapy is unaffordable.

Awareness of STIs in general and HIV in particular was greater in students attending urban than rural schools. The numbers of sexually active urban school attendees was, in comparison, lower. It can be deduced that awareness of the risks of STIs contributed to the lower rates of sexual activity and higher use of condoms in this population. The emphasis on increased awareness thus appears to have a potential to dent the relentless increase of the epidemic in this group.

We believe this paper is the first to report cases of boys who have sex with males in Zimbabwe. Those involved were young and only two, used protection. Although homosexuality is illegal in Zimbabwe, this report shows that like elsewhere in the world, there are clearly persons of that sexual preference in both urban and rural settings. The numbers of persons of that sexual preference countrywide is unknown and is likely to remain so as long as homosexual sex is prohibited. The void in knowledge does not contribute to the fight against HIV and leaves young, homosexual and bisexual males vulnerable. No messages are tailored for this small group. It is unclear whether there are appropriately trained personnel who would give these teenagers the specifically targeted risk reduction information in a non-judgmental manner.

Our aim in analysing the responses of attendees of rural and urban schools separately was to establish whether there were differences in teenage sexual activity and consequently whether efforts at risk reduction within these teenage populations could be tailored differently. The data suggests that there are minimal differences in both awareness of STIs and sexual activity in the two population groups. Although the level of awareness was comparable, more rural school attendees are sexually active and less practiced safe sex. The overall impression is that more concerted, selectively targeted efforts at educating the teenagers are required. The messages should target heterosexual and homosexual teenagers based in both urban and rural areas.

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