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ORIGINAL ARTICLE

Appropriate HIV and AIDS Interventions drawn from Baseline Knowledge Attitude and Behaviour Surveys of University Students

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ABSTRACT

Aim and Objectives: To sequentially assess the levels of Knowledge, Attitudes and Practices of HIV and AIDS among students at the University of Zambia and the extent to which this information can be used in HIV programming on Campus to plan for appropriate interventions.

Design: A cross-sectional exploratory survey design was used. The 2005 survey involved only first year students at the University of Zambia, while the 2006 followup survey was conducted among students from all schools on main campus, with the exception of the School of Medicine on a separate campus. All participants signed informed consent.

Main outcomes: Knowledge, Attitudes and Practices regarding HIV and AIDS among University of Zambia students.

Measures: Data was collected using validated self-administered standardized semi-structured questionnaire on knowledge, attitude and practices regarding HIV/AIDS

Results: Among the 844 first year students who took part in the 2005 baseline 642 (76.1%) felt that they had heard enough about HIV and AIDS pandemic while in the 2006 follow-up survey, 581 (76.1%) respondents said they knew enough about the pandemic. Only 3 (0.4%) students reported never having heard about HIV and AIDS. Of the respondents from the 2005 and 2006 survey38 percent and 29 percent felt that were not at risk of contracting HIV. Yet, 26.1 percent and 54 percent of respondents in the 2005 and 2006 baseline surveys respectively reported having experienced vaginal sex. Of these, only 38 percent and 50 percent respectively had used a condom during their last sexual encounter. Many do not practice safe sex, as almost one in ten students never uses condoms, while 26 percent occasionally use them.

Conclusions: HIV knowledge does not seem to have effected behavioural change in students, as they continue to engage in unsafe practices. HIV programmes have an effect on knowledge, but may not necessarily change attitudes and practice of risky behaviour. More work is therefore needed in this area. An HIV and AIDS programme with strategies that promote positive attitudes and behavioural changes towards safer sex is needed.

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INTRODUCTION

Research elsewhere suggested that students at university engage in risky sexual behaviours as part of growth and development[1]. No studies have ever been done in universities in Zambia. Information was required to inform the university response to HIV appropriate interventions in particularly for students. The main streaming process for HIV and AIDS at UNZA yielded a sustainable HIV and AIDS program with a well-entrenched response to HIV and AIDS Early interventions included the realization that capacity building and information sharing would in turn depend on evidence generated by research such as baseline surveys for appropriate program intervention. Encouraged by interest and processes at the University of Western Cape

(UWC) in South Africa, UNZA undertook the first baseline survey in partnership with university of Western Cape (UWC) among first year entrants in 2005 as part of the joint partnership between UNZA and UWC. A more inward looking survey, with similar objectives was conducted in 2006 at UNZA. This paper outlines the important contribution of these baseline studies to subsequent decisions for programming.

The University of Zambia and the University of Western Cape collaborated as the ZAWECA HIV and AIDS Peer-education Programme. Simultaneously both institutions conducted two Baseline Surveys during the two-years of the project. Similar questionnaires were used on new first-year students and the results were compared in the second year.

AIMS AND OBJECTIVES

Aim: To sequentially assess the levels of Knowledge, Attitudes and Practices of HIV and AIDS among students at the University of Zambia and the extent to which this information can be used in HIV programming on Campus to plan for appropriate interventions

Objectives

1. The main aim of the 2005 Baseline Study was to determine the HIV/AID Knowledge, Attitudes and Practices among the students coming into the university for the first time and before they are exposed to HIV/AIDS information on Campus.
2. The 2006 Baseline Study built on 2005 objectives, to determine the HIV and AIDS Knowledge, Attitudes and Practices of the students in the various schools and subsequent years of study at UNZA, not only in the first year.

METHODS

2005 Baseline Survey

In the first baseline, cross-sectional data was collected using quantitative approaches with both structured and semi-structured questionnaires among first-year students at both institutions. All students coming directly from secondary schools, and not having gone to other tertiary institutions before coming to the university, were targeted. A total of 1200 first year students were targeted from whom 912 self administered questionnaires were retrieved and 844 analysed.

2006 Baseline Survey

In the second study the same methodology was used. It was important to obtain representative informants among all the students in the University. The total number of all the students enrolled by year of study was used as the sampling frame. All the students were therefore given chance to be included and were targeted for inclusion in the sample. Departments in schools, and later on classes by year of study were randomly selected. From each selected class, pre-determined number of students was systematically obtained.

All the students were selected using a stratified sequential sample, using schools and sex as strata. Then, systematic sampling was applied using probability proportion to size (PPS). This meant that more students were selected in larger classes. Each school was assigned trained research assistants to help in the data collection process.

Representation in terms of sex and sample sizes was a critical factor. For instance, UNZA has 8010 full-time students and 1,991 on distance learning. Only those on full-time were considered as they spend more time on campus and thereby were more fitting to respond to the study questionnaires. About 15 per cent of all the students were targeted for self-administered questionnaires. This gave a target of about 1200 students for inclusion in the sample.

Selected students were met in classrooms, with consent from their lecturers. They signed forms for informed consent. The questionnaires were then distributed. Upon completion, most of the students returned the questionnaires during the class contact hours where the research assistants collected them. Other students also took the completed questionnaires, and sometimes, incomplete ones, to their lecturers, research assistants or the principal investigator's office.

Data Analysis

The Data was entered through EPI-data software package and verified and processed using EPI-Info software package which has standard consistent checks and editing procedures. Simple range and skip errors were corrected at data entry point while data verification and cleaning were carried out immediately after data entry. For analysis, the statistical package for social sciences (SPSS) was used.

Ethical consideration

Permissions were sought at various institutional levels, senior management, lecturers. The study was cleared by the Research and Ethics Committee of the University of Zambia.

All records were not traceable back to the informant, providing the needed confidentiality.

Strengths and Weaknesses

The two surveys provided much needed guidance for the HIV and AIDS programme at UNZA, providing information on abstinence and sexually active students and in some cases reasons for and type of sexual activity. Although the follow-up baseline survey of 2006 did not involve the same respondents of 2005 survey, many lessons concerning knowledge, attitudes and behaviours of students at UNZA were learnt. These lessons form a strong basis for the main streaming of HIV programmes in the university. Information bias may not be completely ruled out from students' respondents due to the nature and sensitivity of the topic the surveys assessed. The results from these two surveys may further be directly applicable for HIV programming at UNZA, but can only offer extrapolation for students at any other university.

RESULTS

HIV and AIDS related Knowledge and Awareness

Table 1a demonstrates knowledge and awareness to the extent that all students seemed to acknowledge the need for information on HIV and AIDS and to know how it is transmitted. They did not know where to get condoms on campus in 2005, but that improved in 2006, similarly with how to use the condom and where to access VCT which both improved in 2006.

Table 1a: HIV/AIDS KNOWLEDGE & RELATED AWARENESS

Table 1a	2005		2006	
HIV/AIDS KNOWLEDGE & RELATED AWARENESS	YES	NO	YES	NO
I know enough about HIV and AIDS	642 (76.1 %)	202 (23.9%)	581 (76.1%)	161 (21.1%)
I am sick and tired of hearing about HIV and AIDS	225 (26.7%)	619 (73.3%)	154 (20.3 %)	579 (76.3%)
Mosquitoes can transmit HIV	51 (6.1%)	789 (94%)	-	
I know where to get condoms on campus	321 (38.3%)	517 (61.7%)	710 (93.5%)	49 (6.5%)
I know how to use a condom	440 (52.1%)	404 (47.9%)	386 (84.3%)	72 (15.7%)
I know where to access VCT on campus	513 (61%)	328 (39%)	541 (71.3%)	218 (28.7%)
I know my HIV status	204 (24.2%)	640 (75.9%)	214 (28%)	545 (71.8%)

Attitudes and Perceptions towards HIV and AIDS

Table 1b shows perception of personal risk was lower both in 2005 and 2006 with awareness of the need for protection with the condom during sex. Oral sex as a transmission route was thought unlikely (60%) in 2005, with most, 64 percent considering it likely in 2006.

Table 1b: ATTITUDES AND PERCEPTIONS

Table 1b	2005		2006	
ATTITUDES AND PERCEPTIONS	AGREE	DISAGREE	AGREE	DISAGREE
I am not personally at risk of contracting HIV/AIDS	321 (38.1%)	523 (61.9%)	227 (29.9%) {No response: 30 (4%)}	502 (66.1%)
HIV is a disease for homosexuals	76 (9%)	767 (91%)	-	
No need of a condom if you love your partner	150 (17.8%)	691(82.1%)	-	
One can contract HIV by donating blood	286 (34%)	557 (66.1%)	-	
I wouldfeel uncomfortable hugging a person infected with HIV/AIDS	142 (16.8%)	702 (80.3%)	108 (14.2%) {No response: 20 (2.6%)}	631 (83.1%)
I would feel uncomfortable using the same toilet with a person infected with HIV/AIDS	-		185 (24.4%) {No response: 21 (2.8%)}	553 (57.3%)
HIV testing must be made compulsory to university students	-		104 (13.7%) {No response: 16 (2.1%)}	639 (84.2%)
I have visited a VCT centre before	-		34% 60% {No response: 5%}	
I intend to go for an HIV test	450 (53.3%)	394 (46.7%)	-	
One can contract HIV through oral sex	24 (40%)	36 (60%)	488 (64.3%) Don't Know: 140 (18.4%) No response: 70 (9.2%)	61 (8%)

Risky Behaviours

In table 1c risky behaviours were identified, with 62 percent of the respondents not having used condoms in the last vaginal encounter, in 2005, while 93 percent participated in oral sex in 2005 and 70 percent in 2006.A few, (3%) admitted to anal sex among them 9.2 percent used condom during anal sex with some agreeing they had not used a condom (12.6%).

On how frequently they used condoms during sex, 18 percent had never, 29 percent occasionally and 53 percent always in 2005, while 9.4 percent had never, 26 percent occasionally, 30 percent always and 19 percent often, with 16 percent not responding in 2006.

Table 1c: **RISK BEHAVIOURS**

Table 1c	2005		2006	
RISK BEHAVIOURS	YES	NO	YES	NO
In a boy/girlfriend relationship	-		388 (51.1%) {No response: 40 (5.3%)}	331 (43.6%)
Experienced vaginal sex	221 (26.1%)	623 (73.8%)	409 (53.9%) {No response: 49 (6.5%)}	301 (39.7%)
Used a condom during the last vaginal sex encounter	84 (38%)	137 (62%)	-	
Participated in oral sex	60 (7%)	784 (93)	136 (17.9%)	528 (69.6%)
Experienced forced sex	55 (21.9%) {Not sure: 71 (28.3%)}	125 (49.8%)	79 (17.2%) {No response: 61 (13.3%)}	318 (69.4%)
Reported the forced sexual act	-		3 (2.4%) {No response: 83 (65.7%)}	37 (30.1%)
Had anal sex	-		23 (3%) {No response: 96 (12.6%)}	640 (84.3%)
Used condom during anal sex	-		11 (9.2%) {No response: 93 (78.2%)}	15 (12.6%)
Frequency of condom use	Never: 40 (18.10%) Occasionally: 64 (29%) Always: 117 (52.9%)		Never: 43 (9.4%) Occasionally: 119 (26%) Always: 137 (29.9%) Often: 87 (19%) No response: 72 (15.7%)	

DISCUSSION

In order to effectively mainstream HIV and AIDS in any university, there is need for data that accurately describe sexual behaviours and sexual health status of the university student body.

Knowledge

Drawing from the results of the two baseline studies, it is clear that UNZA students have heard a lot about HIV and AIDS. Both baseline studies students report 100 percent knowedge some even claiming they were even sick and tired of hearing about the scourge. This is a good development, as it shows that HIV programme activities have been effective in reaching out to the majority of students.

Although a small percentage of student have identified need for more HIV/AIDS knowledge, the majority other expressed fatigue of HIV Information which raises concern about efficacy of strategies to implement HIV programs. Have we been too monotonous in our approach both at university and national levels? How often, for instance, do we update our billboards carrying HIV and AIDS messages? Innovative and creative ways of spreading HIV information should be developed. When HIV messages regarding risk prevention are perceived as "nothing new" by the target audience, chances are high that they will go unheeded to.

Despite a few misconceptions on HIV transmission the majority had correct knowledge. However the knowledge was not reflected in behaviour. For example, in the 2006 survey, more than half of the respondents said they had engaged in vaginal sex before and 50 percent of them admitting not having used a condom at their last sexual encounter. This revelation comes at a time when every sexual encounter without a condom is considered a high risk.

The results of these baseline surveys seem to offer support to Opt and Loffredo, who indicated that knowledge alone is not sufficient enough to bring about safe sex practices. While knowledge about HIV and AIDS is one step towards reducing its spread, the decision to change behaviour may be affected by factors intrinsic to the person such as self-concept and self efficacy.

The results from the 2005 survey suggest that more than one quarter of the students had their first sexual encounter at UNZA. Being away from parental care, and finding themselves in a place which offers total freedom (university), young students may become excited at the prospect of having their first sexual experience. This raises the need for all new students at the university to undertake a life skills HIV and AIDS programme to equip them with skills and capacity to resist all forms of negative peer influence.

Attitudes

Additionally, the two baseline surveys have established that the attitude towards HIV and AIDS as well as PLWA does not seem to be in any way influenced by knowledge of HIV. Close to a quarter of the respondents in the 2006 baseline said they would feel uncomfortable sharing the same toilet seat with an HIV infected person, whereas 17 percent of the respondents in the 2005 survey would feel uncomfortable hugging an HIV infected person. The implication of this is that good knowledge alone does not lead to attitude change towards HIV and AIDS and PLWA. The question now is; if knowledge alone is not enough to change attitudes, what is it that could be done to facilitate attitude change in students? There is need to refocus our HIV programmes towards the complexities of sexuality among students.

Behaviour

The baseline surveys unearthed some of the most risky behaviours among university students; oral and anal sex. Despite being among the heavily criminalised and penalized acts in Zambia, they have not received much publicity in Zambian institutions of learning. Very little, if not nothing, has been done to sensitise the university community on the risky factors associated with these behaviours. According to Section 155 (a) of the Penal Code Cap 87 of the Laws of Zambia, "any person who has carnal knowledge of any person against the order of nature commits a felony and is liable upon conviction to imprisonment for a term not less than fifteen (15) years and may be liable to imprisonment for life."

Notwithstanding the heavy penalty prescribed for these offences, it is the reality that these unnatural acts do take place right within the walls of the university and within the boy-girl relationships. For instance it was found that a small percentage in the 2006 survey report having had anal sex without use of condoms and oral sex. A similar

study at the University of Florida had revealed that 78 percent of the students reported ever participating in anal sex, while 19.5 percent reported having ever experienced oral sex. Of those who engaged in oral sex, a whopping 85.5 percent never used a condom. Could we conclude that these high-risk behaviours are a common trend in institutions of higher learning?

The unfortunate situation at the University of Zambia is complicated by the fact that slightly close to one in five respondents expressed ignorance about the possibility of HIV transmission through oral sex. In addition, the majority of the respondents do not seem to utilise Voluntary Counselling and Testing (VCT) services. There seems to be the casual attitude on the part of students to go for VCT despite these services being made accessible. It is suggested that a study be conducted to explore the possible barriers to utilisation of VCT services by university students so that measures can be put in place. HIV testing is necessary if people are to avoid further infections or re-infections.[3] We further propose that issues of anal and oral sex be highlighted in universities because they are silently taking place, yet noone seems to care. Whether or not it is between partners of different sex, anal sex, for example, remains an unnatural offence which is punishable under the Zambian laws besides being a high HIV-risk behaviour.

The high incidence of unreported forced-sex among the respondents in the two surveys is a cause for concern. It is not clear whether students are not aware that forced sex even by a love partner amounts to rape, which is a crime. The majority of the respondents who had had sex without their consent never reported these cases. Forced sex which in most cases is dry, can lead to friction, tear and bleeding; hence exposing one to the HIV virus. There is need to raise awareness about the dangers of forced sex among the university community. Victims of such cases should be encouraged to report the cases to relevant authorities.

CONCLUSION

The two baseline surveys have revealed that a large number of university students have at one point engaged in a high-risk behaviour related to HIV transmission. Equally disturbing was the fact that high-risky unnatural sexual behaviours such as 'sodomy' were being practiced by some students, with very few of them taking precautionary measures such as condom use. These findings are in sharp contrast to the respondents' perceived higher levels of HIV knowledge; thereby leading to a conclusion that knowledge alone is not enough in facilitating behaviour change. The HIV and AIDS programme at UNZA therefore needs ongoing strategies to promote positive attitudes and behavioural changes towards safer sex as well as maintaining abstinence.

Recommendations

Two categories of students have emerged; those who are sexually involved and those who are not. There is need to develop an HIV and AIDS programme that addresses both categories without bias. Messages that promote and encourage safe sex practices, such as consistent condom use, should be preached to the sexually active group. In the same vein, there should be increased availability of condoms, including information about how to get and use them.

The messages to those who are not active in sex ought to highlight the advantages of abstaining as well as the need to delay or refuse sex.

A compulsory life skills HIV and AIDS programme for all first year students as part of their orientation, may be a necessary step towards addressing the HIV and AIDS situation on campus.

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