

Assessment of HIV/AIDS knowledge, attitudes and behaviour of high school students in Papua New Guinea

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SUMMARY

Objective. To assess the knowledge, attitudes and behaviour of high school students (grade 10) with regard to HIV infection and AIDS. **Methods.** A self-administered questionnaire survey was carried out in 21 high schools in 6 different provinces. The questionnaire was anonymous and contained questions about HIV transmission, preventive measures, attitudes towards HIV infection and a few questions about personal sexual behaviour. **Preliminary Results.** A total of 1811 students completed the questionnaire. 46% were female. The average age was 17 years. Over 98% knew what AIDS and HIV were. 97% knew that HIV was sexually transmitted, but many misconceptions existed: one-third thought that HIV was transmitted by mosquitoes, 7% that HIV-infected persons were a danger in the classroom. 72% knew that using a condom at every sexual encounter was a way of protection from HIV infection. Approximately 25% reported to have had sexual contacts, and of 15-year-old students 14% were sexually active. Although STD/AIDS education is part of the curriculum for grade 8 the principals of the majority of the schools reported that no formal teaching was done. **Discussion.** Although the majority of students knew that HIV is sexually transmitted, basic knowledge about STDs is lacking and is not taught as part of the curriculum in most of the schools. Teaching about STDs and HIV needs to be enforced and safe sexual practices need to be discussed with the students.

Introduction

Papua New Guinea (PNG) has entered a critical period in the control of the HIV epidemic. Although the reported number of cases has been relatively low, significant increases have occurred in recent years. By using World Health Organization (WHO) methodology, it is conservatively estimated that there are now between 3000 and 6000 people with HIV (human immunodeficiency virus) infection and it is projected that in the year 2000 there will be between 8350 and 15 300 individuals infected with HIV and between 1520 and 3250 people with AIDS (acquired immune deficiency syndrome).

School-based education is one of the main intervention strategies advocated by the World Health Organization in the fight against AIDS. In PNG prevention of sexual transmission of HIV has been given high priority in the current AIDS prevention and control program and attention is paid to informing and educating key decision-makers, opinion leaders, youth and the general public. One of the strategies includes sexual education in schools, and education about sexually transmitted disease (STD) and HIV was made mandatory for grades 8 to 12. However, although AIDS education is formally a part of the curriculum there has been no evaluation of what high school students actually know about HIV and

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AIDS. There is some anecdotal evidence that teachers themselves feel the need for more training and education in this area.

Objective of the survey

A survey was carried out to collect information on the knowledge, attitudes and behaviour of different groups of students in relation to HIV and AIDS. The survey included primary school (grade 6) and high school (grade 10) students. The results of the survey will be used for the development of appropriate training and health education materials. This paper includes only the results of the survey carried out among high school students.

Study methods

A self-administered questionnaire survey was carried out among students attending high schools in different provinces of PNG.

The questionnaire was developed in collaboration with staff of the Department of Education and was based on materials produced by WHO (1,2). The questionnaire was anonymous and included questions dealing with knowledge about STDs and HIV/AIDS, about attitudes towards HIV-infected persons and about the personal sexual behaviour of the students.

Based on the data of the AIDS and HIV Quarterly Report of the STD/AIDS Unit of the Department of Health, we selected the provinces with the highest number of reported cases as survey sites.

The schools in the different provinces were selected in collaboration with the Provincial Assistant Secretary for Education. Government and non-government schools were included in the survey.

The survey was coordinated at provincial level by the provincial paediatricians, and in one instance by the provincial hospital medical superintendent.

Data entry and analysis were done using the data entry and analysis packages of EpiInfo5.

Results

Demographic data

A total of 1811 students of 21 schools in 6 different provinces completed the questionnaire (Table 1). 54% of the students were males. The mean age and median age were both 17 years. Although the survey was primarily carried out among grade 10 students, 14% of the study population consisted of students attending grade 9 or grade 12.

TABLE 1

NUMBER OF SCHOOLS AND NUMBER OF STUDENTS PER PROVINCE

Province	Number of schools	Number of students (%)
East New Britain	2	148 (8.2)
National Capital District	9	950 (52.5)
Western Highlands Province	2	193 (10.7)
Milne Bay Province	2	196 (10.8)
Madang Province	2	176 (9.7)
Morobe Province	4	148 (8.2)
Total	21	1811 (100)

General knowledge about STDs

The majority of the students knew that syphilis and gonorrhoea are sexually transmitted (73% and 88% respectively), but only 33% knew that donovanosis is sexually transmitted and a small percentage, less than 4%, thought that meningitis, typhoid and tuberculosis are sexually transmitted. Only 31% of the students knew that discharge is a major symptom of gonorrhoea.

Knowledge about HIV infection and AIDS

Nearly all students knew the correct meaning of the abbreviations HIV and AIDS (98% and 99% respectively). Although most students knew that HIV is sexually transmitted, many misconceptions existed about other modes of transmission of HIV (Figure 1).

32% of the students knew that a person who is infected with HIV does not need to look sick and 92% of the students answered correctly that a blood test is needed to determine whether somebody is carrying the virus.

The majority of the students, 76%, knew that

AIDS cannot be cured.

72% of the students knew that correct use of a condom protects against HIV infection, but 27% thought that it was sufficient protection to get to know the partner first or to make sure that the partner had not had sex in the previous six months. 1% answered that there is no way of protection against HIV infection.

Sources of information

The most important sources of information (Figure 2) for the students were articles in the newspaper, followed by health education talks by health workers. Schools were fourth on the list and were an important source of information for 58% of the students. Community leaders and politicians were the least important sources of information.

Attitudes

Some of the questions in the questionnaire were asked to evaluate the attitudes of the students in relation to HIV/AIDS and towards HIV-infected persons (Table 2). Approximately equal numbers of students answered positively,

mode of transmission

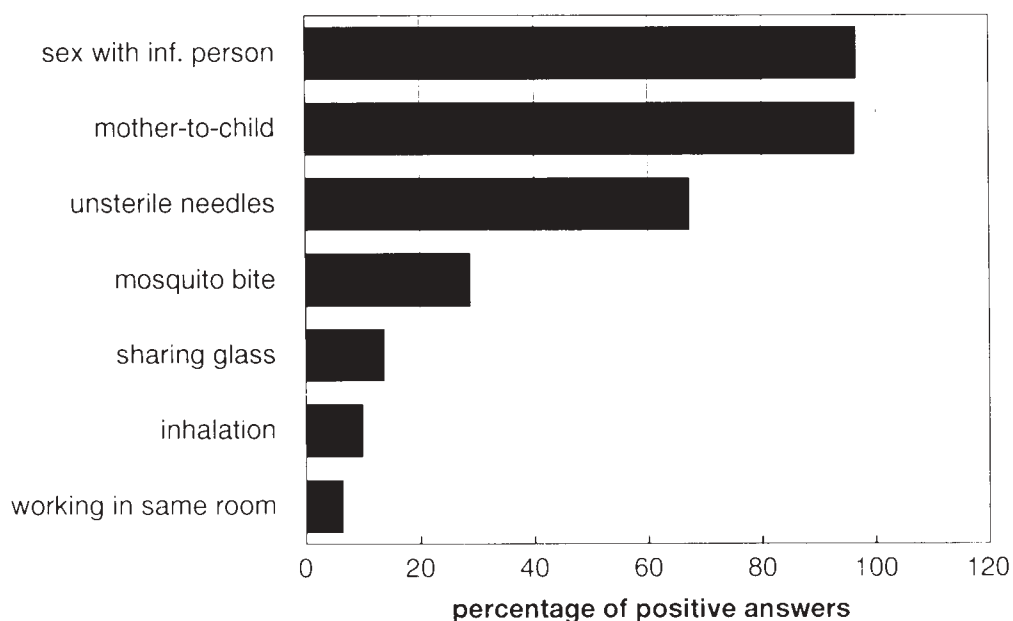


Figure 1. Knowledge about the modes of transmission of HIV/AIDS.

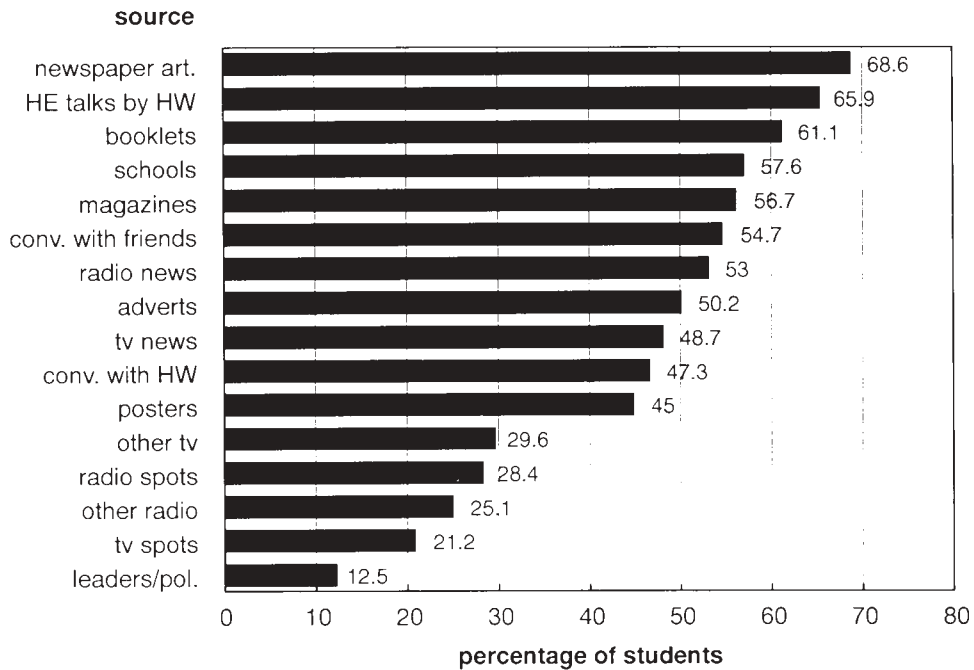


Figure 2. Sources of information about HIV/AIDS for students. HE, health education; HW, health worker.

negatively or 'do not know' to the questions related to discrimination of HIV-infected persons. The students who agreed that an HIV-infected person should be dismissed from their job also agreed that an HIV-infected student should not be allowed to continue study.

Personal sexual behaviour

25% of all students indicated that they had had 1 or more sexual partners in the previous year. Their mean age was 17 years, with the youngest student being 12 years. Of the 15-year-old students 14% were sexually active. 81% of the sexually active students were males. Of the sexually active students 19% (6% of all students) had ever had sex for money or favours.

Discussion

The objective of this study was to collect information about the knowledge, attitudes and behaviour of grade 10 high school students in PNG in relation to HIV infection and AIDS. It was not intended to compare knowledge of high school students with young people of the

same age who do not have high school education, nor was it intended to measure the depth of the knowledge.

The answers to the questions on the general knowledge about sexually transmitted diseases show that general knowledge is lacking despite the fact that these subjects are supposed to be taught in grade 8 and that a teachers' guide is available (3).

The questions related to HIV infection and AIDS show that most students are aware of the condition and know the meaning of the abbreviations. Whilst the majority of the students knew that HIV is sexually transmitted, a relatively high proportion indicated that they thought it could be transmitted through mosquito bites, sharing a glass and droplet infection. Even casual contact by working in the same room was seen by 7% of the students as a possible mode of transmission. These findings – that a significant proportion of students do not know the basic facts relating to HIV transmission – indicate that teaching has not been adequate.

TABLE 2

ATTITUDES OF STUDENTS IN RELATION TO HIV AND AIDS

Question	% of students who answered 'yes'
Do you know a person who is HIV infected?	13.3
Do you talk with friends about HIV and AIDS?	70.7
Are you afraid of getting AIDS?	94.5
Do you think that an HIV-infected person should be dismissed from his or her job?	31.9
Do you think that an HIV-infected student should be discontinued from his or her study?	34.6
Do you think that an HIV-infected person should receive standard medical treatment?	35.7

The fact that 14% of the 15-year-old students are sexually active should make adequate sexual education an urgent issue in high schools. Schools are an important source of information for students and prevention of sexually transmitted diseases, including HIV infection, is essential in these young people who have already started or will become sexually active in the near future. Although the majority of students said that they are afraid of getting AIDS and know that using a condom is a way of protection, those who are sexually active do not use them as regularly as would be expected. This may be because condoms are not readily available – an issue we have not explored in this survey – or because students do not feel that HIV infection and AIDS is something that affects them directly.

As far as attitudes of the students are concerned, it is quite clear that many students do not know how to deal with HIV-infected persons. It is, however, important to note that the students who agreed that an infected person should not be dismissed from the job were the same as the students who would allow an infected student to continue studies. There was, therefore, a consistency in the answers.

There was no statistical difference in the knowledge between male and female students,

but there was an obvious difference in sexual behaviour.

Although the survey was not designed to evaluate the teaching practices or the knowledge of the teachers, we did ask the headmasters of a number of the participating schools how STDs and HIV were taught in their schools. In most cases it was not taught extensively and many teachers indicated that they did not feel confident about the subject. It was discussed with the students as part of science, home economics or religious classes, but usually not in great detail. In several schools the students were given the opportunity of asking questions after completion of the questionnaire, and it was notable that in most instances teachers left the classroom at this point, and left the investigators to answer and discuss matters with the students.

Conclusions

Schools are an important source of information on HIV and AIDS for students. It is essential that students know the facts about sexually transmitted diseases and the way in which they can protect themselves. Results from the survey show that the knowledge of grade 10 high school students about sexually transmitted diseases, including HIV and AIDS,

is inadequate and inaccurate. This lack of knowledge, especially about the different modes of transmission of HIV, may influence not only their personal sexual behaviour but also their attitude towards HIV-infected persons since uncertainty about transmission may cause unnecessary fear. Although they know that the main mode of transmission of HIV is through sexual contact, and they are aware of the protection a condom offers, this knowledge is not translated into appropriate sexual behaviour. The results of the survey seem to indicate that teaching of these subjects is inadequate in most schools and that teachers need further training to be able confidently to discuss issues related to sexuality, STDs and HIV with the students. Further follow-up to evaluate the teaching practices and the knowledge of teachers and their needs for further training in this area is necessary if adequate teaching of students is to be achieved. It may also be necessary to look into the possibilities of other personnel, such as health

workers, becoming involved in teaching some of these subjects.

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