A Pilot Study of the Knowledge, Behaviour and Attitudes Connected with HIV/AIDS among Youth in PNG

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Abstract

This study investigated the level of knowledge, the prevalence of risky behavior and the attitudes connected with HIV/AIDS among the youth in Madang province. Field research was conducted among students at one of the tertiary education campuses in Madang (n=30) and youth in one of villages in Bogia District (n=30). A questionnaire was designed for interview and was collected in May, 2003. The results showed that the students' group presented a higher level of knowledge about the nature of AIDS in comparison with the villagers. A recommendation is made that further surveys are needed to study the knowledge and beliefs connected with AIDS in order to guide education policy in a more effective way.

Introduction

HIV infection has grown into a worldwide pandemic and recently Papua New Guinea has been declared by Temu, the director of UNAIDS, as 'a new frontline of the AIDS epidemic' (UNAIDS, 2005). PNG has now the Pacific region's highest number of HIV/AIDS carriers. Further the director underlined that extreme poverty, sexual violence, inequality between men and women and urban migration had acted together to make PNG society vulnerable to the epidemic. Between 1995 and 2000, HIV infection measured in Port Moresby had been rising by about 60 per cent per annum (Caldwell, 2000). If this rise continues in the next ten years it is expected that 10 per cent of PNG society will be infected with the HIV virus. Such a rapid spread of the HIV infection was noted only in sub-Saharan Africa.

The epidemic is going to affect people's lives as well as the economy in PNG. A 2002 report commissioned by AusAID, examining the potential economic impact of AIDS in PNG, predicted that economic well-being in PNG will fall between 12 and 48 per cent by the year 2020. The same report projected that the labour force can drop by 30 per cent, and that the budget deficit may increase even by 20 per cent.

Therefore in view of the AIDS epidemic in PNG, further research providing data for a better understanding of social and behavioural factors promoting the spread of HIV infection is of paramount importance. The aim of this study was to investigate knowledge concerning the nature, methods of prevention, and prevalence of risky behaviour and attitudes related to AIDS.

The study follows the strategic directions in the Papua New Guinea National Strategic Plan on HIV/AIDS (2004–2008), which states that 'Social Behaviour Research is a highly effective tool for short-term applied research that can be used for designing intervention materials and strategies' (National AIDS Council, 2004). Other authors also pointed out that studies on AIDS-related knowledge, attitude, beliefs and behaviour will provide valuable information in assessing the level of AIDS risk in particular populations, target risky behaviour and thus guide preventive policy development (see McGrath & Rwabukwali, 1994; Uwalaka & Matsuo, 2002; and Tavoosi *et al..,* 2004). There have been a few studies in PNG presenting the influence of knowledge (Jenkins & Alpers, 1994) and culture on sexual behaviour (Lemeki *et al.*. 2003).

This study was designed to target youths. This group was indicated as a high-risk group in the PNG National Strategic Plan (Caldwell, 2000). Also the head of AusAID expressed the opinion that youths because of their high risk of HIV infection have to be targeted by research and preventive actions.

Method

Field research was conducted among students at one of the tertiary education campuses (n=30), and youth in a village (n=30), both in the Madang Province. The study included unmarried individuals aged between 16 and 35. The selection was done by a cluster sampling. One class of students was selected for the survey, while the youth from the village gathered after a Sunday church service and were interviewed.

An anonymous questionnaire semi-structured into open, closed and multiple-choice questions was designed for the interview in English for students and Tok Pisin for villagers respectively. It was collected by adequately trained students in May 2003. To reduce a bias connected with intimate questions about sexual behaviour, an interviewer was of the same gender as an interviewee. The interview was structured into four main sections: socio-demographics, knowledge about AIDS; risky behaviour and applied prevention; and attitudes towards the HIV/AIDS sufferers. Informed consent was obtained from each participant and ethical approval was obtained. All students completed the questionnaire. Collected data were sorted and analyzed.

Results

A. Demographic characteristics

The sample consisted of 60 participants: 30 students and 30 village youth. The study included 28 females (median age 20 years) and 32 males (median age 22 years). The group of tertiary students (n=30) consisted of 15 females and 15 males. The average age in the students group was 24 years. The village youth group (n=30) included females (n= 13) and males (n=17) with an average age of 19 years and average education level of grade 9. The study included unmarried individuals, aged between 16 and 34. Students were representing a

mixture of different PNG cultures, whereas village youths were a single cultural group.

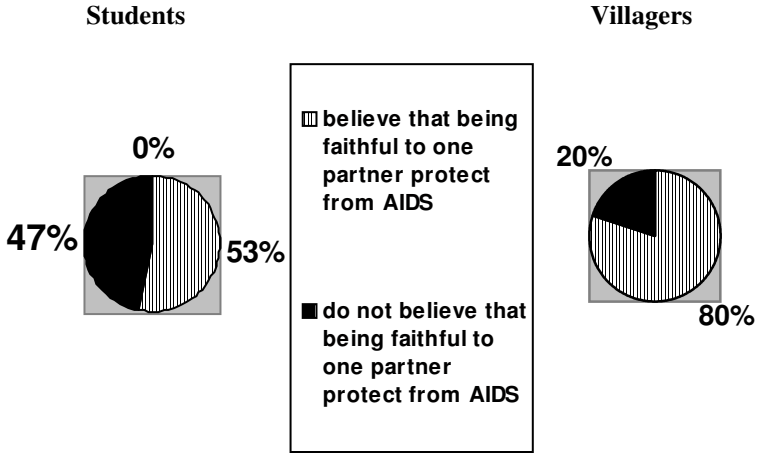
B. Knowledge about AIDS

The causative factor for AIDS was known by thirteen out of thirty (43%) students, but only by 3 villagers (10%). The majority of students (n=25; 83%) was aware that HIV was destroying the host defence system whereas only 4 out of 30 (13%) villagers had any idea about the mechanism by which HIV was damaging the body. All people surveyed pointed out that sexual intercourse was the main route of AIDS transmission. However, 27% of students (n=8) and 27% of villagers (n=8) believed that AIDS could be acquired by kissing. Seven villagers (23%) expressed fear that mosquito bites could also spread AIDS. Most of the respondents (22 students and 23 villagers) knew that HIV infection develops slowly into AIDS over the years.

C. Prevention and sexual behaviour

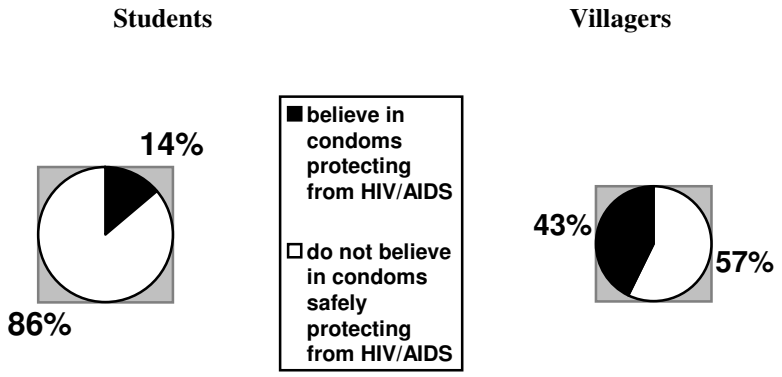
While the majority expressed fear of being infected, they all agreed that the main way they could be infected with HIV was via sexual contact. Six students and 16 villagers knew about the risk of infection by using contaminated needles.

Diagram 1. Percentage of students and village youth believing that faithfulness to one partner is an effective prevention against HIV/AIDS infection (Madang 2003)



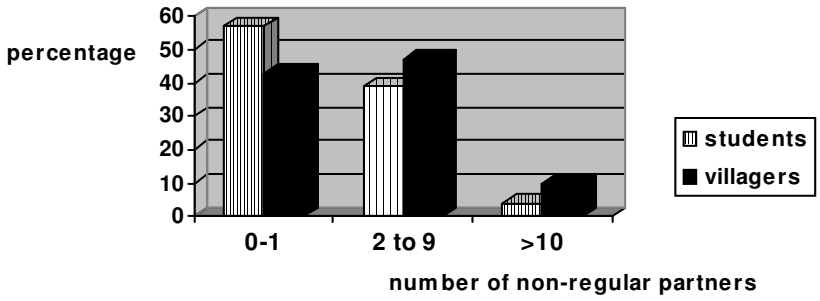
Half of the students (n=15) and 80% (n=24) of villagers believed that faithfulness to one partner gave them protection against AIDS, while only 13% of students (n=4) and 47% of villagers (n=14) held the same belief with respect to the use of condoms.

Diagram 2. Percentage of students and village youth believing that condom gives 100% protection from acquiring HIV/AIDS (Madang 2003)



Regarding risky behaviour, 37% of students (n=11) and 47% of villagers (n=14) had a few sexual partners; 3% of students (n=1) and 10% (n=3) of villagers had many (more than 10) sexual partners, while 30% of students (n=9) and 43% of villagers (n=13) had no sexual contact within the last year.

Diagram 3. Percentage representation of number of sexual partners in students and village youth in Madang Province in the last year (2003)



Irregular use of condoms with a non-regular partner was reported by 40% of students (n=12) and 37% of villagers (n=11).

D. Attitude

Half of the students versus only one of the villagers have met people sick with AIDS. Half of the investigated villagers (n=15) and 57% of students (n=17) felt compassion towards the person sick with AIDS. However, both groups - students and villagers - presented a high level of fear in connection with the sick, 57% (n=17) and 50% (n=15) respectively.

Table 1 Attitude towards the sick with HIV/AIDS expressed by youth of Madang Province (2003)

Attitude	Villagers	Students
General fear of contact with a person sick with AIDS	17 (57%)	6 (20%)
Fear to visit the house of a person sick with AIDS	14 (47%)	9 (30%)
Fear to live next to the house of a person sick with AIDS	18 (60%)	7 (23%)
Will not accept someone sick with AIDS coming back from the capital to the home village	10 (33%)	3 (10%)
Will not accept a person sick with AIDS on a village party	7 (23%)	2 (7%)
Will not accept a person sick with AIDS in the church	1 (3%)	2 (7%)
Will not accept a child sick with AIDS at school	7 (23%)	1 (3%)
Fear to shake hands with a person sick with AIDS	9 (30%)	7 (23%)

Generally females from the village showed a much higher level of fear towards people sick with AIDS than males. For instance, in the village - 35% of males (n=6) and 69% of females (n=9) expressed general fear of contact with a person sick with AIDS. In both groups together 22% of males (n=7) and 86% of females (n=24) would be afraid to live next to the house where a person sick with AIDS was living.

Suggestions and Recommendation

In conclusion, although based on a relatively limited number of cases, the present study suggests:

- Generally students show a greater knowledge about HIV/AIDS and have on average a smaller number of non-regular sexual partners than village youth. This can suggest a positive correlation between AIDS-related knowledge and a reduction of risky behaviour.

- About half of youth adhering to premarital abstinence or faithfulness to one partner, make this method of HIV/AIDS prevention worthy of further promotion through health education.
- A striking inconsistency in the use of condoms (no one using condoms for all non-regular sexual contacts) suggests very low effectiveness of this method in the prevention of HIV/AIDS spread in PNG settings.
- Recommendation is made that further surveys are needed to study the knowledge and beliefs connected with AIDS in order to provide significant information guiding the education policy in a more effective way.

Discussion

Method

A self-delivered interview questionnaire is a commonly used tool in both qualitative and quantitative cross-sectional population studies. Similar to this study other researchers have used a questionnaire to assess knowledge, attitudes and risky behaviour related to HIV/AIDS among selected groups (Uwalaka & Matsuo, 2002; Tavoosi *et al.*, 2004; Vinh *et al.*, 2003; Health Workers in rural Rwanda, 2004; Dodoo & Ampfo, 2001; Rodgier *et al.*, 1993; Friesen *et al.*, 1996).

In this study the questionnaire was used for face-to-face interviews. To reduce bias caused by reluctance to reveal details about sexual behaviour, the gender of the interviewer was the same as the respondent. However, selecting the village youth attending Sunday service can be a potential source of selection bias.

Smith *et al*. (2000) are pointing out that self-completed questionnaires often lack details, whereas face-to-face structured interviews allow participants to clarify their answers and expand upon the questions being asked. One of the potential weaknesses of the study is a statistically insufficient sample size. Therefore to draw statistically significant conclusions the study requires a larger number of participants.

A few studies using a similar methodology were conducted to inform and guide HIV preventive and educational programs (Vinh *et al.*, 2003; Trajman *et al.*, 2003; Islands Business, 2004; Rodgier *et al.*, 1993).

Knowledge

The general knowledge of the students was good - 85% correct answers, and comparable to Nigerian students – 96% correct answers (Odujinrin *et al.,* 1991) or Djibouti African high school students – 64% (Rodgier *et al..*, 1993).

However, an item concerning the viral cause of AIDS was answered correctly by only about 43% of students (n=13) and 10% of village youth (n=3). Other researchers also noticed difficulties in grasping the concept of viral infection. Uwalaka *et al*. (2002) showed that with a high level of knowledge related to AIDS among African college students, the cause of AIDS was not known to the majority of respondents.

Furthermore, Odujinrin *et al*. (1991) found that only about 40% of students knew that AIDS is caused by a virus. Our findings show that generally men had a better AIDS-related knowledge than women, which is consistent with other studies (Health Workers in rural Rwanda, 2004).

A previous study by Friesen *et al.* (1996) assessing AIDS-related knowledge among PNG high school students showed that over 90% of students knew what AIDS and HIV are. However there were many misconceptions about the routes of transmission of HIV; about 30% believed HIV can be transmitted by a mosquito bite, 7% thought that HIV- seropositive students pose a danger to others in a classroom.

Our findings showed that 27% of students (n=8) and 27% of villagers (n=8) believed that AIDS could be acquired by kissing, whereas seven villagers (23%) expressed fear that mosquito bites could also spread AIDS. Six students and 16 villagers knew about the risk of infection by using contaminated needles.

A recent study among youth in West Yangoru reported alarmingly low AIDS-related knowledge (Islands Business, 2004); 52% of youth believed that AIDS is the same as HIV, 82% are not aware of treatment for HIV/AIDS. Much less knowledge was demonstrated by Iranian students who identified mosquito bites (33%) or swimming pools (21%) as routes of transmission (Tavoosi *et al.*, 2004).

Behaviour

While the majority expressed fear of being infected, they all agreed that the main way they could be infected with HIV was via sexual contact. Half of the students (n=15) and 80% (n=24) of villagers believed that faithfulness to one partner gave them protection against AIDS, while only 13% of students (n=4) and 47% of villagers (n=14) held the same belief with respect to the use of condoms.

Regarding risky behaviour, our results showed that over 40% (n=12) of students and about 60% (n=18) of villagers admitted having from a few to many sexual partners, while 30% of students (n=9) and 43% of villagers (n=13) had no sexual contact within the last year.

An earlier study in PNG by Jenkins and Passey (1998) emphasized a high level of teenage sexual activity and low levels of condom use. A more recent study recorded that 76% of youth in West Yangoru had multiple sexual partners and

do not use condoms, thus creating an environment conducive to the rapid spread of AIDS (Islands Business, 2004). More promising results were noted by Friesen *et al.* (1996) among PNG high school students showing that only 15% of 15-year-old students were sexually active.

Vinh *et al.* (2003) noted that only 11% of Vietnamese youth were active sexually. Rodier *et al.* (1993) found 22% of African secondary school students were sexually active, recording that boys were more likely to be sexually active than girls (40% vs. 3%).

In the current study, it was noted that none use condoms consistently for all non-regular partners. As few as 40% of the students and 37% of the villagers reported irregular use of condoms with non-regular partners.

Other studies reported that regular usage of condoms among students in US was 40% (Brown, 2000); health workers in Rwanda – 17% (Health Workers in rural Rwanda, 2004); high school students in Africa – 24% (Rodgier *et al.*, 1993); students in Greece – 80% for boys and about 60% for girls (Merakou *et al.*, 2002); Vietnamese youth - 80% (Vinh *et al.*, 2003).

Attitude

In the current study half of the students versus only one of the villagers had met people sick with AIDS. Half of the interviewed villagers (n=15) and 57% of students (n=17) felt compassion towards those sick with AIDS. However, both groups - students and villagers - presented a high level of fear in connection with the sick, 57% (n=17) and 50% (n=15) respectively.

Our findings showed that only a small proportion of youth would not accept a person sick with HIV/AIDS at school: respectively 23% of villagers (n=7) and 3% of students (n=1). The vast majority of our students (except 3%) was ready to accept a sick AIDS colleague at school, whereas Tavosi *et al.* (2004) reported that 46% of Iranian students believed that sero-positive students should not attend ordinary schools.

The current study revealed that females from the village showed a much higher level of fear towards people sick with AIDS than males. It is consistent with findings from Rwanda, where men who scored higher on knowledge than women had a more positive attitude towards infected individuals (Health Workers in rural Rwanda, 2004).

For instance, our results revealed that in the village - 38% of males and 71% of females expressed general fear of contact with a person sick with AIDS. In both groups 22% of males (n=7) and 86% of females (n=24) would be afraid to live next to the house where a sick with AIDS was living.

Relations

Generally in the current study students showed a better knowledge about HIV/AIDS and had on average a smaller number of non-regular sexual partners than village youth. This may suggest that increased knowledge is correlated to behavioural changes.

Likewise positive correlation was noted by Tapia-Agurre *et al.* (2004) among Mexican students; among male students better knowledge about AIDS increased the likelihood of condom use, while in female students increased knowledge reduced the number of sexual partners. Also Uwalaka *et al.* (2002) found that male Nigerian students with increasing knowledge are more likely to have changed their sexual behaviour towards safer practices than female students.

This finding can suggest that males dominate sexual relationships with regards to the performance of safe sexual practices. Odujinrin *et al.* (1991) showed that 40% of adolescents had changed their risky behaviour once they heard about AIDS. The main change was not having sexual intercourse with prostitutes. Takyi (2001) noted that men in Ghana in response to AIDS had changed their behaviour. However it means avoidance of multiple partners rather than consistent use of condoms.

On the other hand, a discrepancy between knowledge and behaviour was reported in other studies. Trajman *et al.* (2003) pointed out that despite 94% of students being aware of the need for condoms for protection, only 34% always used condoms during sex.

Similarly, Dodoo *et al.* (2001) concluded that despite expectations that condoms would protect people from HIV infection and despite increased knowledge related to AIDS, the use of condoms in sub-Saharan Africa remains extremely low.

Macintyre *et al.* (2001) found that a high level of mortality from AIDS experienced by African community is an important factor in behavioural change. They found that personal experience of a person sick with AIDS is a significant predictor of behaviour change.

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