
AIDS-related Behaviour Change, Knowledge and Opinions Among First Year University Students

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Abstract

This study examines knowledge about HIV transmission, opinions about AIDS-related social issues and concern about contracting AIDS among a group of first-year university students. Relationships with self-reported changes in sexual behaviour are described.

Knowledge of transmission modes was high and most participants reported considering themselves well-informed. Half claimed that they practised "safer sex" but less than one-third discussed AIDS with partners. Among participants reporting higher frequency of sexual intercourse and multiple partners, there was only a marginal increase in more appropriate sexual practices. Participants reporting no concern about contracting AIDS were less likely to change their behaviour. Implications for AIDS education and broad counselling strategies in universities and colleges are briefly described.

Résumé

Cette étude examine, auprès d'un groupe d'étudiants de première année d'université, les connaissances concernant la transmission du HIV, les opinions en ce qui concerne les questions sociales reliées au SIDA, et les craintes reliées aux possibilités de contracter le SIDA. Les changements dans le comportement sexuel sont décrits.

La connaissance au niveau des diverses façons de transmettre le SIDA était élevée et les participants se considéraient bien informés. La moitié déclarait mettre en pratique les moyens qui permettent de minimiser les chances de contracter le SIDA lors de relations sexuelles. Par contre, moins d'un tiers ont discuté du SIDA avec leurs partenaires. Parmi les participants qui rapportaient pratiquer plus fréquemment la pénétration et avoir plusieurs partenaires, il se trouvait y avoir qu'une augmentation minime dans la pratique d'une sexualité où les moyens permettant de minimiser les chances de contracter le SIDA étaient utilisés. Les participants se sentant peu concernés face à la possibilité de contracter le SIDA étaient moins susceptibles de changer leur comportement. Les implications concernant l'éducation et les stratégies de counseling du SIDA dans les universités et dans les collèges sont brièvement abordées.

Students in post-secondary educational institutions belong to an age group that is at increasing risk of infection with the Human T-cell Lymphocytic Virus Type 111, known as HIV, and its development into Acquired Immunodeficiency Disease (AIDS). Twenty percent of reported AIDS cases at present occur in the 20-29 year age group. Limited data exists concerning duration of the HIV latency period, and the average age at which the symptoms of AIDS first appear is expected to decline (North & Spratt, 1987). In response there has been a growth in AIDS education programs and AIDS-related counselling services at universities and colleges.

The need for continuing AIDS education and counselling is well documented. Studies with adolescents, student teachers, and student nurses indicate misconceptions concerning the disease and an expressed

need for information (Bowd, 1987a, 1987b; Bowd & Loos, 1987; DiClemente, Zorn & Temoshok, 1985; Strunnin & Hingson, 1987). Although regional differences exist, earlier research with American adolescents has suggested that many were poorly informed regarding AIDS transmission and prevention (DiClemente et al., 1985; Strunnin & Hingson, 1987). Studies with post-secondary students have produced similar results. A 1987 report indicated 74% of Stanford University students were unaware of "safer" sexual practices (Hirschorn, 1987a). Canadian surveys of senior level teacher education students and baccalaureate nursing students in first and fourth year found significant areas of misinformation and prejudice (Bowd, 1987; Bowd & Loos, 1987). More recent studies continue to indicate a knowledge deficit among post-secondary students (Ishii-Kuntz, 1988; Winslow, 1988).

According to Biemiller (1987a), North & Spratt (1987), and Punter (1987), education for the promotion of health behaviour is the most effective available method in helping limit the spread of AIDS. However it has been pointed out that there is reluctance among young people to seek AIDS information from college resource centres because of the sexual connotations of the disease (Biemiller, 1987b; S. Tittley, personal communication, January 18, 1989). There is also a reluctance to discuss preventive measures with partners before beginning sexual relationships (Hirschorn, 1987b).

Preliminary results from a survey of Canadian 13-20 year olds, which included first year college and university students, suggest that while young people have a fear of HIV infection, existing programs have been of limited effectiveness in changing actual sexual behaviour and related attitudes (Kerr, 1988). This is consistent with the results of a recent study which suggests that while post-secondary students appear to be concerned about AIDS and claim to be modifying sexual practices, there is little correlation between concern about AIDS and alteration in behaviour (Carroll, 1988).

The present study examines the relationships between knowledge about AIDS, opinions regarding related social issues, concern about contracting AIDS, and the practice of lower risk sexual behaviour. Results are examined in relation to the provision of appropriate AIDS education and counselling services for university and college students.

METHOD

Participants were 514 students (285 female, 229 male) enrolled in first year courses at a small Ontario university. Class members who were in second or later years of university study were excluded from the sample. Participation was voluntary and 50 students declined to take part. The median age of participants was 20 years ($M=22.2$, $SD=6.22$).

A questionnaire concerning demographic background, information about the disease, and perceptions of related social issues and behaviour

TABLE 1
Main Source of Information about AIDS

<i>Source</i>	<i>Percentage citing</i>
Television	60.3
Magazines	13.6
Newspapers	11.2
Educational Brochures	6.8
Radio	2.3
Public Lectures	1.4
Friends	1.2
Other	3.3

was designed for this study. Items were derived from the literature and an examination of two previously employed scales (Bowd, 1987b; Bowd & Loos, 1987) to ensure relevance. Items were screened for ambiguity and sensitivity with a group of 35 fourth-year students. The final questionnaire consisted of two items concerning age and gender, five concerning personal sexual behaviour, four concerning knowledge about AIDS and its transmission, and nine concerning opinions about AIDS-related social issues. Opinion items used a five-point Likert type scale indicating degree of agreement/disagreement. The questionnaire was responded to anonymously and a coded response sheet was used to guarantee privacy in responding.

RESULTS

Most participants considered themselves well-informed about AIDS (77%, including 10% very well-informed), while 23% considered themselves poorly informed. The importance of public education about AIDS was strongly endorsed: 77% felt it was very important, 22% felt it was important.

As indicated in Table 1 the primary source of information about AIDS and AIDS-related issues is television. Magazines and newspapers are also important. Only a small percentage cited educational materials (lectures, brochures) as their main source of information.

A high level of awareness of sexual transmission and transmission through exchange of body fluids is indicated, although 17% of subjects believed, incorrectly, that the disease could be contracted through friendly kissing. Nearly all subjects believed that the disease is not transmitted by casual contact (Table 2).

AIDS was perceived by approximately 90% of respondents as a significant medical threat to the community at large, and not as a

disease limited to homosexual and bisexual males, drug abusers and clients of prostitutes. Only 18% believed that the spread of the disease among heterosexuals was exaggerated by the media (Table 3). Although only a small number described themselves as gay (1.4%) or lesbian (1.0%), 32% reported that the possibility of contracting AIDS had worried them at some time. This percentage rose to 39% when the item referred to concern about acquiring AIDS through "physical contact" with an HIV positive individual.

Fifty percent of the participants believed that they should change their own sexual behaviour because of AIDS and consistent with this perception 48% reported practising "safer sex." However, considerably fewer (27.4%) discussed AIDS and other sexually transmitted diseases with their partners before having sex for the first time.

Results for the three items concerning perceived changes in sexual behaviour were re-computed for participants who reported they were currently "sexually active" ($n=285$) and for subjects reporting two or more sexual partners during the previous year ($n=153$). Slightly higher levels of behaviour change were reported than for the sample as a whole. Sixty-five percent of individuals with multiple partners believed they should change their sexual behaviour because of AIDS, 61% reported practising "safer sex," and 28% discussed AIDS with their partners before first having sex.

Participants identifying themselves as sexually active indicated the age at which they first had sexual intercourse ($M=16.25$, $SD=3.65$, median=16), and the number of times they had sexual intercourse during the previous year ($M=71$, $SD=94.50$, median=33). Neither vari-

TABLE 2
Beliefs Concerning Transmission of AIDS

<i>Transmission Mode</i>	<i>Percentage Believing</i>
Contact through the air in an enclosed environment (such as an elevator)	0.6
Casual contact such as shaking hands or hugging	0.6
Social contact through food preparation and eating utensils	5.8
Close contact through friendly kissing	16.8
Blood transfusions with infected blood*	96.5
Use of contaminated needles in drug usage*	96.1
Heterosexual intercourse with an infected male*	94.0
Heterosexual intercourse with an infected female*	93.4
Homosexual intercourse*	85.1

* Known transmission modes HIV.

able correlated significantly with perceived changes in sexual behaviour on account of AIDS. However agreement with the statement "I have never worried about the possibility of contracting AIDS" correlated negatively with reporting that safer sex was practised ($r = -.35, p < .001$) and positively with the view that personal sexual behaviour need not change because of AIDS ($r = .45, p < .001$). Sexually active individuals who reported they had never worried about contracting AIDS were also less likely to report discussing the subject with their sexual partners ($r = .20, p < .001$).

DISCUSSION AND CONCLUSIONS

These results are consistent with American studies indicating areas of misinformation concerning AIDS among student populations (Strunin & Hingson, 1987; Winslow, 1988). A high percentage of subjects were aware of the transmission of AIDS through exchange of body fluids. However, the fact that 34% reported concern about infection through other than confirmed routes may reflect doubts about knowledge and the credibility of sources. The relatively low awareness of homosexual transmission is somewhat paradoxical although consistent with a recent study of student nurses (Bowd & Loos, 1987). This result may reflect current television attention to the heterosexual impact of AIDS, since television was cited as the main source of information about AIDS for most students.

The fact that relatively few students reported discussing AIDS and other sexually transmitted diseases with partners prior to intercourse indicates a need for inclusion of appropriate strategies within AIDS education and counselling programs. More than half of the students in this study were sexually active and of these 54% reported multiple partners within the previous year. These results, along with a reported mean age of sixteen for first sexual intercourse indicate that adolescents and young adults should be a primary target for AIDS education.

The findings indicate that misinformation concerning AIDS and its transmission is present, that television, newspapers and magazines are the three primary sources of information, and that many students lack strategies to promote avoidance of AIDS and other STD's. Knowledge alone is not a sufficient condition for change to occur in sexual behaviour (Ishii-Kuntz, 1988; Kerr, 1988). Communications designed to motivate individuals to engage in safer sexual behaviour should employ appropriate anxiety-arousing content as well as clearly delineating action strategies (Leventhal, Safer & Panagis, 1983).

AIDS education programs at the university level should address attitude and skills development through simulations, group interaction and other activity-based instructional methods. University and college administrations should ensure that programs are implemented using

TABLE 3
Opinions About AIDS-related Social Issues

<i>Item</i>	<i>Percentage Agreeing</i>	<i>Percentage Disagreeing</i>	<i>Mean*</i>
AIDS is only a threat to male homosexuals and drug abusers	6.4	90.9	4.43
I have never worried about the possibility of contracting AIDS	32.1	58.4	3.29
I sometimes worry that I might contract AIDS by being in physical contact with someone who has been exposed to the AIDS virus	38.9	39.5	3.02
The only heterosexual men who are risking AIDS infection are those who have sex with prostitutes	6.4	90.3	4.32
I now practise "safer sex" because of my concern about AIDS	48.0	14.0	2.49
I see no need to change my sexual and social behaviour because of AIDS	29.9	49.7	3.32
Before having sex with someone for the first time, I frankly discuss the possibility of exposure to AIDS and other venereal diseases	27.4	23.8	2.93
Women need have no concern about AIDS infection, unless their sexual partner is a gay or bisexual male	6.4	89.5	4.34
The possibility of AIDS spreading significantly in the heterosexual population is exaggerated by the media	17.9	72.4	3.75

* A score of 1 indicates "strongly agree" while a score of 5 indicates "strongly disagree." A score of 3 indicates "no opinion."

methods of delivery appropriate to student needs and evaluated for their effectiveness in reducing high risk behaviour.

Counselling and peer helping support programs are an important adjunct to AIDS education in colleges and universities. Peer counselling in Canadian post-secondary institutions has enjoyed considerable development over the past 25 years (Lawson, 1989) in part, as Carr (1984) has noted, because most students rely primarily on friends for assistance when having difficulties or making decisions.

In the context of university and college counselling services, peers may be a credible and approachable source for AIDS-related information and behavioural strategies. Peer counselling at the college level has been used in health promotion including mental health and sexuality (Lawson, 1989), and seems particularly relevant as a means to provide support regarding AIDS-related concerns and behaviour (Baiss, 1989).

The employment of appropriate counselling strategies and education programs is critical in current efforts to reduce the spread of AIDS among young adults, and a continuing need exists for research in this area. It is important for researchers to examine young persons' perceptions of invulnerability to HIV infection and consequent reluctance to modify sexual behaviour. Research on the effectiveness of peer-assisted AIDS education and counselling for at-risk individuals is essential in ongoing efforts to halt the spread of the disease.

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