

AIDS: KNOWLEDGE AND ATTITUDES OF STUDENT NURSES IN AUSTRALIA AND CANADA

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The impact of AIDS on health care resources and personnel in Australia has been significant. With 2,527 diagnosed cases of Acquired Immunodeficiency Syndrome (AIDS) to March, 1991 (AHSR, 1991), nurses, more than ever, must acquire knowledge and clarify their values about the disease AIDS. This impact has been particularly evident in the State of New South Wales with 1,570 diagnosed cases of AIDS (approximately 30.5 cases per million population per annum), representing 62.5% of the national total (AHSR, 1991). When compared with statistics from other countries, with the exception of the United States and Africa, the number of diagnosed cases of AIDS in Australia (approximately 148 cases per million population), is relatively high. For example, in April 1991 Canada reported 41 cases per million population (WHO 1991a), and a total of 71.6 cases per million were reported in the United Kingdom (WHO 1991b). By contrast, the United States had 145 cases per million population and 650 cases per million were reported from the Congo (WHO, 1991a). Indications are, however, that the numbers diagnosed with AIDS in Australia will increase significantly within the next decade, given the relatively late entry of the disease into this country, the long incubation period of the virus and the numbers of seropositive individuals in Australia. The National Centre In HIV Epidemiology and Clinical Research has estimated the number of seropositive individuals in Australia in March 1991 as between 17,619, approximately 12,769 of whom reside in New South Wales (AHSR, 1991). These figures, however, are conservative estimates, as legislation regarding the notification of HIV-positive cases is ambiguous. It would appear that Australian health care professionals will increasingly be called upon to care for greater numbers of people with AIDS. Furthermore, because of the nature of the disease and the fact that it is largely refractory to medical treatment, nurses, more than any other health care professionals, are, and will increasingly be, on the "front line" of AIDS patient care. (Armstrong-Esther & Hewitt; 1989; Kelly, St. Lawrence, Hood, Smith & Cook, 1988; Lester & Beard, 1988).

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It is, therefore, both timely and appropriate that an assessment of nurses' knowledge of and attitudes towards AIDS be conducted. The intent of this study was to assess what differences, if any, exist between the Australian and Canadian student nurse samples.

Literature Review

As reported by Bowd & Loos (1987) and Van Servellen, Lewis and Leake (1988), studies of AIDS and its transmission are prevalent; however, very little research exists concerning the knowledge and attitudes of nurses with regard to AIDS either in the United States or in Canada. What is frequently reported in these countries, and in the Australian literature, is the epidemiology of the disease as well as its clinical manifestations.

Along with lack of research concerning the knowledge and attitudes of nurses, there is also a relative lack of research data on the knowledge and attitudes of the community, although, as Turtle et al. (1989) report, these studies began to appear in the United States in 1984 and in Australia in 1987. It has been noted that despite the millions of dollars that have been spent on AIDS-related research, relatively less has been spent on determining the beliefs of the community at large in Australia, (Heaven, 1987). Similarly, in North America, Van Servellen et al. (1988) contend that, despite the plethora of published writings on the medical aspects of AIDS, very little attention has been directed to eliciting the responses of health care personnel to the AIDS crisis. In an Australian study measuring community beliefs about the spread of AIDS, Heaven (1987) found that beliefs about the spread of AIDS are quite complex and that negative attitudes are held by a large section of the population.

Studies measuring attitudes among health care workers have reported fear, prejudice and an unwillingness to care for AIDS patients. In a study by Kelly et al. (1987) which surveyed 157 physicians from three large North American cities with moderate but increasing AIDS prevalence, it was found that social stigmatisation and harsher attitudes were associated with AIDS vignette portrayals rather than with identical vignette portrayals when the illness was labelled "leukemia". The authors also reported a positive correlation between stigmatisation and homosexuality. These findings were replicated by the researchers one year later in their study of practising nurses' attitudes towards AIDS, using a 12 scale Prejudicial Evaluation Tool (Kelly et al., 1988). In a study of 3,000 randomly-selected nurses in the State of California, Servellen et al. (1988) found there was not only a fear of AIDS transmission but an unwillingness to care for AIDS patients that was related in part to discomfort in having to care for and counsel homosexuals. A study by Young (1988), measuring attitudes of registered nurses presently working in positions that were related directly to actual or potential AIDS clients,

found negativity towards homosexuality. Barrack (1988) found that while almost all students surveyed felt that AIDS patients were entitled to the same care as any other patient, almost half preferred not to care for AIDS patients.

Studies have also shown a lack of correlation between knowledge and rational beliefs (Bowd & Loos, 1987; Reed, Wise & Mann, 1986). An Australian study of AIDS-related knowledge and behaviour of students at a metropolitan university, (Turtle et al., 1989), found a marked discrepancy between the knowledge and performance of safe sexual behaviours. Results from a study conducted at a Canadian university school of nursing, (Bowd & Loos, 1987) indicated that, whilst a high level of knowledge regarding the transmission of AIDS existed among respondents, there was also a corresponding agreement that nurses should be free to choose whether they directly care for a client with AIDS. Clearly, as these and other studies have demonstrated, there is not always a correlation between knowledge and rational beliefs or behaviours; furthermore, increasing knowledge has also been found to be associated with increasing fear (Lester & Beard, 1988).

The prognosis of AIDS, and the prediction of its course, require that nurses be knowledgeable about the nature of the syndrome and its social and public health implications (Bowd & Loos, 1987). It is also important that appropriate attitudes concerning care of AIDS patients be fostered in students in an attempt to ensure that clients with AIDS will receive holistic nursing care, which involves a psychosocial and spiritual as well as a physiological focus. This study addresses these issues.

Method

One hundred and seventeen students enrolled in the Undergraduate Diploma Course and Postgraduate Degree Conversion Course for registered nurses at a Sydney university participated in the study. This group, a convenience sample, consisted of 50 first year students (47 female, 3 male, mean age 19 years), 50 third year (final year) students (46 female, 4 male, mean age 21 years), and 17 registered nurses enrolled in the degree conversion course (15 female, 2 male, mean age 22 years). First year respondents represented approximately 25% of the total first year student body, third year respondents represented approximately 33% of the total third year body and registered nurse respondents represented approximately 49% of enrolment in the degree conversion course. A fifteen minute questionnaire, which did not require the respondents to identify themselves, was completed in late 1989. This consisted of demographic data, five items assessing knowledge of AIDS, one item concerning knowledge of transmission modes, and one open-ended item requiring the naming of the syndrome. Twelve items, employing a five-point Likert scale, assessed attitudes about AIDS-related issues in nursing practice.

The measurement tool was a direct replication of the instrument used in the Canadian study (Bowd & Loos, 1987). This study surveyed a cohort of nursing students in the Bachelor programme at an Ontario university. No details regarding construct validity or reliability of the tool were available (Bowd & Loos, 1987), however, it was anticipated that data from the present study could provide validity evidence for the tool.

Results

Responses relating to knowledge of AIDS (Tables 1 and 2), reveal differences on seven items. Australian student nurses were more accurate than Canadians in their interpretation of the acronym AIDS (Table 1). The cause of AIDS was also more readily identified by the Australian group. Canadian student nurses however, revealed more knowledge regarding mortality rates, number of persons suffering from the disease and responsibility regarding notification of AIDS. Knowledge concerning the transmission of AIDS revealed few differences between the groups. (Table 2). Australians were more aware that friendly kissing is not a means of transmission and gave more correct responses to the use of contaminated needles.

Subjects indicated their degree of agreement or disagreement with twelve attitude statements relating to social and educational implication of AIDS for nursing practice (Table 3). Of the three questions relating to the nursing of patients, there was a high level of agreement from both groups about the need for care in assisting a client who is bleeding because of possible exposure to HIV infection. (Table 3). Agreement was high in both groups concerning the psychological needs of the client with AIDS. Of the four questions concerning attitudes to AIDS-related education, again there was a high level of agreement between the two groups. Almost total agreement was demonstrated by both groups with regard to the responsibility of the nursing profession to educate and dispel destructive myths about AIDS in the general public. Again, a high level of agreement was reached with respect to the need of nurses for formal and ongoing education about AIDS (Table 3).

In questions relating to screening of students for exposure to AIDS prior to university admission and the exclusion of students who are HIV positive or have the disease AIDS, there was general consensus in favour of disagreement. In these and other questions regarding attitudes however, where both groups showed high levels of disagreement with the question, there was correspondingly high levels of uncertainty as evidenced by the means (Table 3).

Uncertainty was also high in both groups with regard to quarantining of persons with AIDS as a means of restricting the spread of the disease (refer to mean scores, Table 3). Last, on the question of the right of nurses to choose whether they directly care for a client with AIDS, 26% of Canadian respondents disagreed, compared with 7.7% of Australians (Table 3).

Table 1***Percent Correct Responses to Factual Items about AIDS***

Item (Answer)	Australian Student Nurses (N = 117)	Canadian Student Nurses (N = 114)
What do the initials AIDS stand for? (Acquired Immunodeficiency/Immune Deficiency Syndrome)	76.6	32.6
The cause of AIDS is (A virus that attacks the body's immune system)	92.0	85.3
Patients suffering from the disease AIDS currently have a mortality rate of (no client with AIDS is likely to survive the disease because there is currently no successful treatment)	57.0	93.0
The number of persons suffering from the disease AIDS (i.e. not simply carrying anti-bodies) in Australia/Canada as of May 1989 was approximately 700 Canada/1100 Australia)	35.6	50.0
A reportable disease requires that doctors and other health professional report any suspected cases to the local medical officer of health. In New South Wales and in Ontario the disease AIDS (is a reportable disease)	43.6	84.3

Table 2

Knowledge Concerning the Transmission of AIDS

Transmission Mode	Percentage Believing	
	Australian Student Nurses (N = 117)	Canadian Student Nurses (N = 114)
Contact through the air in an enclosed environment (such as an elevator)	-	-
Casual contact such as shaking hands or hugging	-	0.69
Social contact through food preparation and eating utensils	-	3.0
Close contact through friendly kissing	8.0	15.3
* Blood transfusion with infected blood	98.6	98.6
* Use of contaminated needles in drug abuse	98.0	87.0
* Heterosexual intercourse with an infected male	97.3	96.3
* Heterosexual intercourse with an infected female	93.3	94.0
* Homosexual intercourse	83.3	85.0

* Known modes of transmission of the AIDS virus.

Table 3***Attitudes about AIDS-Associated Nursing Issues***

Item	% Agreeing		% Disagreeing		Mean *	
	Aust.	Can.	Aust.	Can.	Aust.	Can.
All students should be screened for exposure to AIDS before admission to University	12.0	20.0	72.0	66.7	3.8	3.6
Any student registering positive antibodies to AIDS should be excluded from University	2.0	3.7	84.0	82.3	4.2	4.5
Any student suffering from the disease AIDS should be excluded from University	7.0	12.7	78.7	63.3	4.0	3.7
The media have exaggerated the significance of AIDS within the community	21.0	28.0	63.0	60.0	3.5	3.5
The responsibility of the nursing profession to educate the public regarding the reality of AIDS and how it can be avoided is a pressing one	86.0	96.0	2.7	2.0	1.8	1.4
Nurses have a responsibility to help dispel some of the more destructive myths that the public accepts about AIDS	97.0	97.0	1.3	2.3	1.7	1.4

* A score of 1 indicates "strongly agree" whilst a score of 5 indicates "strongly disagree". A score of 3 indicates "uncertain".

Table 3

Attitudes about AIDS-Associated Nursing Issues - continued

Item	% Agreeing		% Disagreeing		Mean *	
	Aust.	Can.	Aust.	Can.	Aust.	Can.
All students suffering from AIDS should be quarantined to help restrict the spread of the disease	12.7	12.3	56.0	67.0	3.5	3.7
Nurses need to be careful in assisting any client who is bleeding because of possible exposure to AIDS	96.0	79.0	-	4.7	1.5	1.7
Information concerning AIDS should form part of current staff education programs in health care institutions	99.0	97.0	-	1.3	1.3	1.5
Information about AIDS should be provided within university level nursing programs	98.6	98.0	0.7	0.7	1.4	1.4
Nurses should be well informed concerning the psychological needs of the client with AIDS	100.0	98.7	-	-	1.7	1.4
Nurses should be free to choose whether they directly care for a client with AIDS	78.0	60.0	7.7	26.0	2.0	2.5

* A score of 1 indicates "strongly agree" whilst a score of 5 indicates "strongly disagree". A score of 3 indicates "uncertain".

Discussion

Differences were noted between the findings of this and the Canadian study in the responses to the factual aspects of knowledge concerning AIDS. Australian nursing students were more aware of the acronym, the cause of the disease and in most instances, means of transmission. This could reflect the two-year time lapse between the two studies and the resulting increase in public awareness during the intervening period. Canadian students however, were better informed regarding mortality rates and the need for notification of the disease.

Little difference overall, was found between the two groups with regard to the transmission of the AIDS virus. Homosexual transmission of the disease among Canadian and Australian students was less widely comprehended than other modes of transmission (Table 2). In the original study Bowd and Loos (1987) speculated that the possible reason for low levels of knowledge among the Canadian students about homosexual intercourse, was the current media attention to the spread of AIDS in the heterosexual community. A similar finding in this study however, has led the Australian researchers to look for another possible explanation. Given the preoccupation of the Australian media with homosexual transmission, the low level of knowledge, on a question that was expected to yield a high degree of accuracy, may well have been related to a weakness in the instrument. This hypothesis of the researchers was supported by the large group of Australian students who later questioned the meaning of the statement "homosexual intercourse" and sought clarification whether or not this referred to intercourse with an infected partner.

With regard to social and educational implications of AIDS for nursing practice, there were many similarities between Australian and Canadian respondents. Predictably, there was almost totally unanimous support for the need for inclusion of AIDS-related education, both in formal tertiary programs and current staff education programs in health care institutions. Similarly, there was almost totally unanimous support for the role of nurses in educating the public. Clearly, the implication of these findings is that AIDS education must be given high priority in health care education programs.

On the question of the right to choose to care for a person with AIDS, moderately high agreement amongst both groups was noted. The explanation given by Bowd and Loos (1987) for the Canadian respondents' support of the right of choice relied on an assumption of irrationally-based anxiety about the transmission of the disease. A similar finding was apparent in this study, highlighting the fact that there is not always a correlation between knowledge and rational beliefs and behaviour or lack of fear and prejudice.

These findings provide support for the results of previous research, Lester & Beard (1988), Reed et al. (1986) and Turtle et al. (1989). However, we suggest that it is too simplistic an analysis to ascribe a monocausal explanation, such as irrational fear, to a highly complex phenomenon of nurses' belief in the right to choose whether or not to care for AIDS patients. For example, Kelly et al. (1987) and Van Servellen et al. (1985) have clearly illustrated the influence of stigmatisation, prejudice and homosexuality on nurses' freedom of choice in caring for AIDS patients.

It is our view that the major issue in this context is the implication of a commitment to a right of choice evident in both studies. As the Canadian researchers Bowd and Loos (1987) state, ethical as well as social and psychological considerations are clearly important in determining the quality of care given to the AIDS patient. These considerations, are acknowledged in AIDS units where only those nursing staff who elect to nurse in the unit, are seconded.

On the question of quarantining, uncertainty prevailed amongst both groups. The Australian responses, with their greater tendency to indecision, may well have been influenced by recent extensive media coverage (The Sydney Morning Herald, 1989) of a controversial incident concerning an HIV-positive prostitute who was detained against her will in a major Sydney hospital, two weeks prior to the distribution of the questionnaires. In a highly controversial move, the New South Wales Government invoked Section 32A of the 1902 *Public Health Act* to detain the woman after she admitted she intended to continue to service clients. This caused widespread community protest from such diverse groups as prostitute collectives, AIDS representatives and civil libertarians. Described as both draconian and arcane, the Act, which was originally used to detain tuberculosis patients in the early 20th century, was invoked in an unprecedented move which raises many legal and ethical questions.

Limitations

The authors stress that appropriate caution should be exercised in generalising the results of these relatively small studies to larger populations. The limitation of inaccurate terminology for HIV and AIDS in the present study should also be acknowledged. In the light of current knowledge, it would be more accurate and appropriate to refer to HIV rather than AIDS transmission and to AIDS as a syndrome rather than a disease. No attempt was made to alter terminology used however, as the authors wished to undertake a replication. Furthermore, this study would have been strengthened by the use of psychometric testing for significant differences. The raw data of the original study was not examined however, because of the time lapse between the two studies.

Conclusion

In summary it would appear that Australian and Canadian nursing students, at least in these limited samples, generally have similar knowledge and attitudes regarding AIDS. This study, with its acknowledged limitations, could be regarded as a pilot study for future collaborative comparative research, targeting a wider population of nursing students in two very similar countries.

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RÉSUMÉ

SIDA: connaissances et attitudes des étudiants-infirmiers en Australie et au Canada

Si l'on veut dissiper les mythes qui entourent le sida et les préjugés dont les sidéens sont l'objet, la diffusion de renseignements pertinents doit non seulement être érigée en principe, mais doit influencer directement sur l'exercice de la profession infirmière. Cette étude visait à reproduire un protocole canadien (Bowd & Loos, 1987) sur le sida et plus précisément sur les connaissances et attitudes des étudiants-infirmiers. Malgré leurs différences individuelles et géographiques, l'Australie et le Canada présentent de grandes similitudes au chapitre de la distribution des cas de sida déclarés. Les résultats de la présente étude effectuée en Australie sont comparés aux données canadiennes. Ils font ressortir un niveau de connaissance et des attitudes similaires face au sida dans les deux populations d'étudiants-infirmiers.