A Study of Knowledge, Attitude, and Sensitivity about HIV/AIDS among School Teachers in Northwestern Himalayas

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North India is considered a low knowledge and low prevalence setting according to the recent National AIDS Control Organization survey regarding HIV/AIDS.[1] As more than one third of the population in India is young adults and adolescents, reaching and educating them is key for prevention programs and a healthier future. School systems provide an ideal situation to impart this awareness and reach adolescents and young adults. Logically, teachers are the ideal sources of imparting information. All schools are required to train some of their teachers in the national HIV/AIDS education training, and they in turn share this information and awareness with the adolescents in schools. However, not many teachers have the knowledge, appropriate attitude, and comfort level needed to impart this information to students.

This paper will discuss results from our brief survey of teachers from public and the private schools in Himachal Pradesh in India that focused on the knowledge of HIV/AIDS, attitude toward people living with HIV/AIDS, and comfort in discussing these issues with students. A sample of 80 teachers (40 each from public and private schools) volunteered for the study. The findings revealed a significant difference between public and private school teachers in their knowledge level ($t=9.45$, $P<.001$), their attitudes toward HIV/AIDS ($t=16.77$, $P<.001$), and their comfort level in discussing these issues ($t=12.65$, $P<.001$). Implications of the study for teacher's training on HIV/AIDS and a proposed intervention are discussed. (*Ethn Dis*. 2008;18[Suppl 2]:S2-172–S2-174)

Key Words: Teacher Training, HIV/AIDS, Attitudes, Knowledge, Comfort Level

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Introduction

North India is considered a low knowledge and low prevalence setting according to the recent National AIDS Control Organization survey regarding HIV/AIDS.[1] Situated in the northwestern Himalayas, the state of Himachal Pradesh is a small mountainous state of India with a population of 6.2 million. The first case of AIDS in Himachal Pradesh was diagnosed in 1992. The figures have rapidly increased since then. Approximately 360 cases of AIDS and 1419 cases of HIV infection have been diagnosed in 58,805 persons screened statewide.[2] The public efforts to contain this hazard are inadequate. India's traditional society and strong social prohibitions lead people to be less receptive to the controversial issues associated with this infection, and this is especially true in the traditional, rural population of Himachal Pradesh.

Most new HIV infections in this state are among the younger population (age 18–24 years).[2] Although in comparison with other states the number of HIV infections remains low, the likelihood of an increased rate of infection is a constant threat, since the available data do not reveal the number of persons who are unaware of their serostatus and therefore may be unwittingly transmitting HIV to others. As very little is reported in terms of public awareness and education in the state regarding HIV prevention, assessing and documenting the extent of knowledge, attitudes, and behaviors of the infected and affected population becomes essential.[3] Literature suggests a gap between knowledge of HIV/AIDS prevention strategies and their practice, which indicates the need for intra- and interpersonal dialogue on these issues.

Because no cure for AIDS yet exists, education is the most important means of preventing this infection in youth. Given the fact that almost one third of India's population is <18 years of age,[4] schools are the obvious platform to impart this information to youth. School teachers can be used to provide education, address misconceptions, and improve the understanding of HIV infection. They provide a crucial link to impart this information successfully and consistently to their communities. Teachers' knowledge and awareness can positively affect the community, since in many societies teachers are known as "gatekeepers" who serve affected communities.[5,6] However, in order to educate their students, the teachers must understand the subject material, both in a developmentally and culturally appropriate manner, and have a repertoire of useful techniques to communicate effectively with students. Teachers' comfort in teaching subjects like reproductive health and HIV infection depends on their attitudes, knowledge, and experience. Educating teachers is considered an effective tool for comprehensive health education.[7]

Education is important to improve understanding of serious illnesses like HIV/AIDS.[8–11] The high prevalence of misconception about HIV transmission may interfere in true knowledge about this disease, even among highly educated professionals (including teachers).[12] Along with knowledge, the attitude of the public toward the infection and toward infected people is an important factor, although teachers often lack adequate knowledge of the disease,[13–15] the literature on teachers' attitudes toward infected people is lacking. In addition, even after having sufficient knowledge, teachers still often

Table 1. Characteristics of 80 public and private school teachers who volunteered for a survey on HIV/AIDS knowledge, attitudes, and comfort level, Himachal Pradesh, India

Characteristic	Public	Private	Total	*P* value
Mean age, years (SD)	40.15 (8.86)	31.7 (4.40)	35.92 (8.15)	<.001
Mean teaching experience, years (SD)	12.20 (5.18)	5.98 (3.37)	9.09 (5.35)	<.001
Sex (%)				
Male	60	32.5	46.3	<.05
Female	40	67.5	53.8	

SD = standard deviation.

feel uncomfortable discussing with students sensitive issues such as sexuality, use of condoms, and sexual relationships.[14,16,17]

Given the critical role that teachers can play in curtailing this infection by helping to educate the general community, the present study focused on assessing the current knowledge level, attitudes toward people living with HIV/AIDS, and the comfort level in talking about issues related to HIV in teachers at four schools (N=80) in the state of Himachal Pradesh.

METHODS

Eighty school teachers from four public and private schools volunteered and consented to participate in this survey. The questionnaires were anonymous. Public schools are owned, controlled, and fully funded by the state government, and private schools generate their own resources and run independently. The sample was 46% male and 54% female. Teachers ranged in age from 25 to 54 years, with an average age of 35.9 years (standard deviation [SD] ±8.15). Teaching experience ranged from 1 to 22 years, with an average of 9 years (SD±8.00).

The measures were selected from the Centers for Disease Control and Prevention.[18] The questionnaires used for this survey were knowledge of HIV/AIDS (25 items measuring functional knowledge about HIV and AIDS), attitudes toward people with HIV or AIDS (10 items measuring educator's acceptance of and attitude toward students or colleagues who have AIDS or are infected with HIV), and comfort with sensitive topics (10 items assessing educator's comfort in discussing HIV-related topics that might be addressed during an HIV education program). These measures were scored according to CDC norms. Scores on the knowledge scale could range from 25 to 125, on the attitude scale from 10 to 50, and on the level of comfort scale from 10 to 50. Estimated internal consistency reliability for each of the scales was good; Cronbach α was .91 for knowledge, .84 for attitudes, and .79 for level of comfort.

Data were collected and entered into an SPSS-readable format and analyzed by using SPSS version 13.0 (SPSS, Inc., Chicago, Ill).

RESULTS

As shown in Table 1, the mean (±SD) age of public school teachers (40.15±8.86 years) was significantly higher than that of the private school teachers (31.70±4.40 years) (t[57]=5.403, P<.001). There were significant sex differences by school type: 60% of public school teachers and 32.5% of private school teachers were male (χ^2 [df=1, N=80] 6.084, P<.05). The public school teachers had significantly more teaching experience on average (12.20±5.18 years) than did their private school counterparts (5.98±3.37 years) (t[67]=6.367, P<.001)

Items corresponding to the knowledge, attitudes and level of comfort scale were constructed so that higher scores on the scale meant greater knowledge, more positive attitudes toward persons living with HIV/AIDS, and greater level of comfort in discussing sensitive topics. Cronbach α was .91 for knowledge, .84 for attitudes, and .79 for level of comfort.

To address the study questions, a series of independent group t tests were conducted with knowledge, attitudes, and comfort as the dependent variables and school type (public vs private) as the independent variable. As shown in Table 2, teachers in private schools had more knowledge, had more positive attitudes, and were more comfortable discussing sensitive topics.

DISCUSSION

School teachers have great potential to influence the health knowledge and attitudes of students and other groups in society.[19] Himachal Pradesh is still at an early stage of the HIV/AIDS epidemic, and school teachers can play a vital role in restricting the spread of infection by disseminating information to students. Our findings highlight the gaps that are important to address in the education and training of teachers. Recent studies recommend that systematic training of teachers in communication skills in discussing culturally sensitive issues related to HIV is essential in eradicating deep-rooted social and cultural constraints.[3]

All the teachers from public and private schools who participated in this study had a graduate degree. Private school teachers were significantly younger and had less teaching experience than did their public school counterparts. The age discrepancy is not surprising. Private schools tend to hire newly trained teachers and do not offer

Table 2. Differences between public and private school teachers in terms of HIV/AIDS knowledge, attitudes, and comfort, Himachal Pradesh, India

Variable*	Mean (SD)	*t*	*df*	*P* value
Knowledge				
Public	47.9 (13.17)	−9.45	56	.000
Private	69.7 (6.22)			
Attitude				
Public	27.4 (3.01)	−16.77	78	.000
Private	41.0 (4.14)			
Comfort				
Public	29.9 (4.02)	−12.65	78	.000
Private	42.4 (4.78)			

* Data were scored such that higher scores reflect more knowledge, more positive attitudes toward persons with HIV/AIDS, and more comfort discussing sensitive topics.
SD=standard deviation

permanent positions with standard salary scales, whereas public schools are run by the government and offer higher salaries and permanent positions with retirement benefits. Hence there is rapid turnover in private schools, with younger teachers gaining their first job experiences in them.

The difference in terms of knowledge regarding HIV/AIDS, attitude toward people living with HIV/AIDS, and comfort level in discussing issues related to HIV/AIDS between the public and private school teachers was significant: private school teachers scored higher on all three measures. Private school teachers were relatively younger than their public counterparts.

Teacher training in Himachal Pradesh occurs in traditional classroom settings. The training mainly emphasizes enhancing cognitive development. Subjects such as public health are not part of the curriculum. An experiential training that uses simulations of real-life situations might help teachers disseminate sensitive information regarding diseases. Such training will help bring about changes in their own attitudes and behavior as well. This study also highlights the need for school-based intervention programs to focus on teachers as well as students.

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