

## Knowledge and Attitude Towards HIV/AIDS Among College Students in Ardabil, Iran

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**Abstract:** Knowledge about the spread of HIV has a critical impact of the prevention of AIDS young people are of particular importance in state policies against AIDS, we intended to assess the knowledge and attitude of college students regarding AIDS in Iran. This study is a cross-sectional study that carried out in 400 first college students. A structured questionnaire was used to assess knowledge about AIDS, source of information and attitudes toward people living with HIV, the students identified mass media (40%) as their most important source of information about AIDS. Only a few students answered all the knowledge questions correctly and there were many misconceptions about the routes of transmissions. College students demonstrated a moderate level of knowledge (67.5%) concerning AIDS and HIV. Results showed that 85% of samples fell all people entering Iran should be tested. Twenty five percent of them believed that people with HIV should not be allowed to use common toilets and 27% incorrectly believed that HIV infected college students be removed from university bedroom. Attitude was significantly correlated with knowledge, ( $r = -0.38, p < 0.001$ ), student with less knowledge scores had more negative attitude toward HIV positive individuals. The knowledge level seems to be moderately high misconception about the routes of transmission were common. Alarming gaps in knowledge about transmission and curability put young Iranian students at risk of contracting HIV. Intolerant attitudes about people living with HIV were prevalent. Present results suggest that a more appropriate education program in colleges in Iran may be necessary to reduce the discrepancy between general knowledge and desirable attitude regarding HIV/AIDS.

**Key word:** AIDS, HIV, knowledge, attitude, college students, Iran

### INTRODUCTION

The Acquired Immunodeficiency Syndrome (AIDS) epidemic is in its third decade and has become a pandemic disease that threatens the world population (Tavoosi *et al.*, 2004). The prevalence of HIV infection and AIDS cases in Iran is low compared to Southeast Asian and western countries (Maswanya *et al.*, 2000). Despite the fact that the global pandemic of HIV infection and AIDS has reached catastrophic proportions, affecting men, women, adolescents and children (Modeste *et al.*, 1993). Statistics show that for five patients affected by AIDS, one is in his 20s (Smith *et al.*, 1993). Given the long incubation period of HIV, it is clear that many older adolescents and young adults with AIDS were infected as younger teenagers (Brooks and Furstenberg, 1990). There are several factors that contribute to the higher risk of HIV infection among young people e.g. first sexual experiences, the higher proportion of sexually transmitted disease, addiction that begins usually at this age and so on (Sechrist, 1997). On the other hand, there is a chance to establish protective health-behavior patterns in young people, which might endure into adulthood. Since there are uncontrolled sexual contacts, high prevalence of

addiction, absence or limited sex education and higher marriage age in Iran, the Iranian youth are counted as a high risk group for HIV infection. It is obvious that against such a background the risk of HIV infection increases. Moreover, because of unreasonable fears among most Iranian people that AIDS education promotes high risk behaviors, sex education about HIV transmission has no place in schools and universities in Iran. Accordingly, the current HIV/AIDS situation and the fact that antiretroviral drugs are not affordable and available for treating vast numbers of HIV-positive individuals makes primary prevention of HIV infection seem the most important, concept in controlling the epidemic (Stratigos and Tzala, 2000). College students attitudes and resulting behaviors about treating HIV infected patients are critical and will become increasingly so in the years ahead. In this study the knowledge and attitude of the first college students were assessed.

### MATERIALS AND METHODS

A cross-sectional study was carried out in April 2007 in the southeast of Iran, Ardabil city. This study was conducted with 400 the first college student for the

purpose of determining their knowledge and attitudes about HIV/AIDS. A sample size for the precision of 5% expected prevalence of 50% and confidence Interval of 95% was calculated as 400. They had not yet begun their Clinical rotations and the vast majority (91%) had never treated or worked closely with AIDS patients.

The sample was randomly selected and stratified by sex and grade level. The data was collected by self-administered anonymous questionnaires. Students filled out a questionnaire inquiring about their attitudes towards AIDS patient and their knowledge about the disease and its means of transmission. The original questionnaire Included 40 questions. One epidemiologist, a specialist in infectious disease and two staff members of university reviewed the questionnaire only 30 close-ended questions were judged as valid and included in the study. this questions covered the following categories: Demographic information (age, sex, place of residence and...), disease knowledge including mode of transmission, high risk group population, attitude towards HIV-positive patients and source of knowledge. Regarding sources of information on AIDS, students were asked to choose from the following sources (more than one answer possible): Newspapers, magazine/weeklies, book, radio, TV /video, parents, teachers and friends. The questionnaire was pre-tested in some students and the cronbach's a was calculated to assess the internal consistency of knowledge question ( $\alpha = 0.75$ ). The questions were answered using the options Agree, Disagree and I don't know. A total score for knowledge was obtained by adding the points given for each answer. For each correct answer 2 points, I don't know 1 point and any incorrect answer zero points were assigned. The sum makes up the total which score ranged between and 50. A higher score indicate a greater level of knowledge. The attitude score was computed similarly; a higher score reflected intolerance towards the infected patients. The data was evaluated by chi-square test and spearman's correlation test using the statistical package of social science (spss Inc) for windows version 10. A p-value of < 0.05 was considered statistically significant. in addition, permission to carry out the university where the survey was performed. Students were informed that their participation was voluntary.

## **RESULTS**

A total of 400 College student (72.25% female and 27.75% male) participated in the study. They were aged 19-25 yeas (mean 20.5±1.33). Sixty four percent of student expressed a wish to know more about HIV/AIDS.

Most of the students were informed about HIV/AIDS by media (40%). Only 34% were aware of the symptoms of

AIDS and 47% knew that AIDS are associated with sexual activities. Eighty six percent stated that young people should be taught how to protect themselves and 57% that teaching at school was in sufficient. Also 39% of college students did not consider themselves at risk of acquiring HIV. Knowledge scores about HIV/AIDS was moderate for 67.5% there were misconceptions about transmission and only 31% knew there is no vaccine and 34% no cure at present. Thirty four percent of students know that infected persons remain healthy for a long period of time. Attitudes toward people living with HIV were neither friendly nor tolerant, including 85% who felt all people entering IRAN should be tested. About 23% of the students believed that people with HIV/AIDS should be able to attend university and should not have to stop working. Twenty five percent of respondents believed that people. With AIDS should not be allowed to use common toilets and that health personnel should attend such patients only while wearing special clothing. Twent seven percent incorrectly believed that HIV-infected college student be removed form university bedroom. approximately, half of student (64%) had a clear fear of contagion thought occupational exposure.

The majority of student (46%) stated they would be willing to perform mouth-to-mouth resuscitation on an AIDS patient in respiratory arrest. Approximately one-Third of the students (36%) stated they would inform the partner of on AIDS patient of the disease, even against the patient's wishes.

A minority of student (28%) would be able to study in the same class with HIV-positive class mates. However, only (22%) of the student responded that they could take care of a person with AIDS without worry. Thirty two percent of the student stated that they prefer not to sit in a class near an HIV positive student [no significant difference between boys and girls (35% VS. 34%)] 27% of student indicated that they would not shake hands with an HIV-positive person if they knew about his or her diseases (24% of boys vs. 23% of girls). Attitude was significantly correlated with knowledge ( $r = -0.38$ ,  $p < 0.001$ ); student with less knowledge scores had more negative attitude towards HIV positive patients. Feeling of students toward an infected person is showed in Table 1.

In multivariable analyses, male students ( $p < 0.001$ ) and urban resident ( $p = 0.0006$ ) demonstrated a higher knowledge of AIDS. Students from rural areas demonstrated more favorable attitudes towards AIDS ( $p = 0.004$ ).

Students who had a good knowledge of AIDS (OR = 1.90, 95% CI: 71.07-3.38;  $p = 0.03$ ) were more likely to be able to live in the same house than those who had

Table 1: Response to question "what are your feeling toward a HIV-positive person?"

Feeling toward HIV positive patient	Female N (%)	Male N (%)	p-value
Hatred	49 (17%)	57 (51.35%)	X <sup>2</sup> = 64.41 df = 2 P<0.00005
Compassion	179 (62%)	23 (20.72%)	
Apathy	61 (21%)	31 (27.92%)	
Total	289 (100%)	111 (100%)	

a poor knowledge. Knowledge scores increased in parallel with student age and positively correlated with a higher level of parent education (p<0.004).

### DISCUSSION

The present study evaluated the Knowledge and Attitude of Iranian college student towards HIV positive and AIDS patients. The vast majority of students in this study got their information on HIV/AIDS from the mass media, but not the most credible sources. This was consistent with the study by Brook and Tavooosi.

Very little communication regarding HIV/AIDS occurred between themselves and their parents or teachers. This suggests the importance of involving parents, teachers and students in AIDS education programs. The stimulation of interested in parents and teachers concerning HIV/AIDS may help them to educate themselves and their children/students (Maswanya *et al.*, 2003) Studies in southeast Asia have shown that most media have done little to change exiting cultural values and prejudice about the sexuality and the situation of people who are living with HIV or AIDS (Tavooosi *et al.*, 2004).

The reports concerning rapid spread of AIDS in various populations have increased the level of anxiety over contagion among students. This may explain why about 64% of students expressed a wish to obtain more information about AIDS and most surveyed students believed that AIDS could be a thread to their society. This finding is similar to that of American and European investigators one decade ago, when the AIDS epidemic was emerging (Tavooosi *et al.*, 2004). In general, the study reveled moderate knowledge about HIV/AIDS among college students. Male students demonstrated a slightly level of knowledge in comparison with female students. This difference is significant statistically and consistent with studies of Brook and Green.

However, Agrawal *et al.* (1999) found that boys had better knowledge than girls and their explanation for this finding was that boys feel freet than girls to talk about matters relating to sex and HIV/AIDS (Agrawal, 1999).

Knowledge scores of students were also positively correlated with a higher level of parent education. Overall, there were many misconceptions about how HIV is transmitted, e.g., by shaking hands, using public toilets, using public swimming pools, etc. This problem was also addressed by previous investigators such as Agrawal and Diclement. In present study, a considerable proportion of students thought that there is a cure for AIDS. This is consistent with the findings of Agrwal *et al.* (1999) and can be attributed to the many false claims published in media and other modes of advertisement. Misinformation concerning a cure for AIDS is one of the risk factors for contracting the disease.

College students in present study were less likely to able to live in the same house with a person having AIDS without worry. Good knowledge was positively associated with living in the same house with people having AIDS without worry. It appears that people with good knowledge concerning AIDS do become more tolerant of people with HIV/AIDS. A report from the philippines demonstrated a positive change. In attitude among nurses and midwives after receiving accurate information (10). It is possible that the college students did not get sufficiently accurate information on HIV/AIDS because they were in the early stage of their course.

It appears that the mass media have succeeded in raising AIDS awareness, but have produced little effect in changing students attitudes toward those with HIV/AIDS Although attitude concerning AIDS probably cannot be improved at once, it could be effective to initiate a campaign through the mass media, aimed at attitude modification. Approximately half of students in present study stated. They would be willing to perform mouth-to-mouth resuscitation apparently expressing little doubt about transmission via salvia.

### CONCLUSIONS

Alarming gaps in knowledge about transmission and curability put young Iranian students at risk of contracting HIV. Intolerant attitudes about people living with HIV were prevalent. The study also revealed the minimal role parents, teachers and lectures in the dissemination of information about AIDS.

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**REFERECES**

- Agrawal, H.K., R.S. Rao, S. Chandrashekar and J.B. Coulter, 1999. Knowledge and attitude to HIV/AIDS of senior secondary school pupils and trainee teachers in udupi District, Karnataka. India Ann. Trop. Pediatr., 19: 143-149.
- Brooks-Gunn, J. And F.F. Furstenberg, 1990. Coming of the age in the era of AIDS: Puberty, sexuality and Contraception. Milbank Q., pp: 59-84.
- Brook, U., 1999. AIDS knowledge and Attitudes of pupils attending urban high schools in Israel Patient Edu. and Couns., 36: 271-278.
- Diclement, R.J., M.M. Ianier, P.F. Horan and A.A. Lodico, 1991. Comparison of AIDS Knowledge, attitude and behaviors among incarcerated adolescents and public school sample in san Francisco. Am. J. Public Hth., 81: 628-630.
- Green, M.S., S. Carmel, S. Tsur, R. Stephon and D. Vardi, 1991. Differences in general Knowledge of HIV/AIDS. Eur. J. Pub. Hlth., 1: 75-78.
- Maswanya, E., K. Moji, Y. Aoyagi, Y. Yahata, Y. Kusano and K. Nagata *et al.*, 2000. Knowledge and Attitude toward AIDS among female college students in Nagasaki. Japan Hlth. Edu. Res., 15: 5-11.
- Maswanya, E., K. Moji, I. Horiguchi, K. Nagata, K. Aoyagi, S. Honda and T. Takemoto, 2003. Knowledge, risk perception of AIDS and reported sexual behavior among students and secondary schools and college in Tanzania. Hlth. Edu. Res., 14: 185-196.
- Modeste, N., C. Francis and D. Matshazi, 1993. AIDS-related knowledge Attitudes, beliefs and behavioral intention of adolescents in Trinidad. Int. Quarterly Commun. Hlth. Edu., 14: 273-281.
- Sechrist, W., 1997. Personalizing HIV infection: Moving students closer to believing this could actually happen to me. J. HIV/AIDS Preven. Edu. Adoles Child, 1: 105-107.
- Stratigos, J.D. and E. Tzala, 2000. Global epidemiology of HIV infection and AIDS. Clin. Dermatol., 18: 381-387.
- Smith, K.W., S.A. McGraw, S.L. Crawford, L.A. Costa and J. Mckinlay, 1993. HIV risk among Latino adolescents in two New England cities. Am. J. Public Hlth., 83: 1395-1399.
- Tavoosi Anahita, 2004. Zaferani Azadeh. Enzevaei Anahita, Parvin Tajik and Ahmadinezhad. Knowledge and Attitude towards HIV/AIDS among Iranian student. BMC Public Health, pp: 4-7.