

## Original Article

### Impact of education on knowledge and attitude on HIV/AIDS prevention

Ahmadraza Jodati, Gholamreza Nourabadi, Susan Hassanzadeh, Saeid Dastgiri, Kamran Sedaghat

From Cardiovascular Research Center of Tabriz University of Medical Sciences and Health Services ,  
Tabriz Iran

Correspondence : Dr. AR. Jodati, Associate professor in cardiac surgery, Department of cardiothoracic surgery, Madani heart hospital, Tabriz , IRAN. E-mail: [Mosharkesh@yahoo.com](mailto:Mosharkesh@yahoo.com)

Received: December 8, 2006 Accepted: February 22, 2007

---

#### Abstract

**Objectives:** The aim of this study was to assess the impact of education on the promotion of the knowledge and attitude of students on HIV/AIDS prevention in Tabriz, Iran.

**Methods:** The study was conducted by self-assessment technique among university students before and after an educational training programme.

**Results:** The findings showed that the knowledge of students increased significantly ( $P < 0.05$ ). The attitude to the problem also increased positively in the subjects ( $P < 0.05$ ).

**Conclusion:** Short term training courses and continuous educational programmes (i.e. peer education, etc) increased knowledge and changed attitude towards AIDS in young students. (Rawal Med J 2007;32:53-55)

**Key Words:** AIDS, HIV, Knowledge, attitude, students

---

#### INTRODUCTION

It is estimated that 5 million new cases of Acquired Immune Deficiency Syndrome (AIDS) with 3 million deaths are noted world wide each year. In 2003, there were 14000 cases infected daily by the virus.<sup>1</sup> There is no reliable data on the prevalence of AIDS in Iran. Official figures by the health authorities in Iran shows that there are 7510 cases in Iran only while it has been estimated more than 30000 cases by the World Health Organization.<sup>2</sup>

The high risk groups for the AIDS include prisoners, addicts, sex workers, and youth.<sup>3</sup> Some studies show that lack of knowledge and negative attitude of high risk population, especially young people, about the transmission of disease and its preventive strategies increase the risk of disease.<sup>4</sup> Reports from Africa, Asia and Latin America have also indicated that educational

programmes may have an impact on the prevention of the diseases at the community level.<sup>5,6</sup> The aim of this study was to assess the impact and efficacy of educational methods on the promotion of the knowledge and attitude of students on HIV/AIDS prevention in Tabriz, Iran.

#### METHODS

Data was collected using a validated questionnaire. The questionnaire included two set of questions: thirty questions to assess the knowledge, and three more questions, as the second part, to evaluate the attitude of students. A sample of 17000 of students of Tabriz University and Tabriz University of Medical Sciences were taken as the study subjects. An

educational programme was conducted within the student groups (20-40 in each group). This included a 45-minutes interactive discussion on the preventive strategies and transmission methods of AIDS.

Forty senior medical students were trained by the university departments of Infection Diseases, Psychiatry, and Community Medicine as coordinators of the discussion groups. In the second stage of the study, 10 percent of study subjects (1778 students) were randomly selected and the same self-assessment techniques were applied to assess the impact of educational intervention.

Likert scaling method was used to measure the knowledge and attitude of students both for before and after the intervention. Kolmogorov-Smirnov test was performed to check the normal distribution of the data, and paired T-test was then used to compare the pre-test vs post-test data.

**RESULTS**

The mean age of students was 20.9±1.20 years and 69.8 percent females (table 1).

There was a significant increase in both knowledge and attitude of the study subjects in terms of AIDS prevention (13 and 12 percent, respectively).

Although a significant increase in the knowledge and attitude was observed in both male and female students, educational intervention had more effect on the knowledge and attitude of female students compared to males. The base line level of awareness and attitude about the prevention of AIDS was however higher in male students compared to females (Table-2).

Medical compared to non-medical students seem to be more alert on the preventive strategies of the disease both in terms of awareness and attitude (Table-2).

There was a positive association between the base line level of knowledge with age in all groups of study subjects. The promotion of knowledge and attitude after the educational programme was also significant in all age groups.

**Table 1. Basic characteristics of study subjects**

	Frequency	Percent
<b>Age</b>		
<b>18-19</b>	424	24.4
<b>20-21</b>	819	47.1
<b>22-23</b>	347	20
<b>24+</b>	149	8.5
<b>Total</b>	1739	100
<b>Gender</b>		
<b>Male</b>	530	30.2
<b>Female</b>	1223	69.8
<b>Total</b>	1753	100
<b>University</b>		
<b>Medical</b>	1627	91.5
<b>Non-Medical</b>	151	8.5
<b>Total</b>	1778	100

**Table 2. Effect of education on the promotion of knowledge and attitude.**

	Before Education (%)	After Education (%)	Percent Changed	Significance
<b>Knowledge</b>	80	90	12.5	<0.05
<b>Attitude</b>	49	55	12.2	<0.05
<b>Knowledge (male)</b>	82	90	9.7	<0.05
<b>Knowledge (female)</b>	78	90	15.3	<0.05
<b>Attitude (male)</b>	49	53	8.1	<0.05
<b>Attitude (female)</b>	49	56	14.2	<0.05
<b>Knowledge (medical)</b>	80	92	15	<0.05
<b>Knowledge (non-medical)</b>	75	81	8	<0.05
<b>Attitude (medical)</b>	51	59	15.6	<0.05
<b>Attitude (non-medical)</b>	28	32	14.2	<0.05

## DISCUSSION

HIV/AIDS has been named as the plague of the 20<sup>th</sup> century. It is now one of the most horrifying and devastating health problems worldwide. Despite new treatment and techniques developed by scientists, the problem still remains unsolved. Thus, for the time being, the most reliable and effective challenge against this disease is primary prevention. Public education has been suggested as the key component of primary prevention of AIDS.<sup>1,7</sup> Success of this approach has been reported from the United States and some other areas in the recent years.<sup>8,9</sup> Our findings showed that an educational intervention might have a key impact to reduce the increasing rate of AIDS occurrence in youth in Iran.

Female students performed better than male students in terms of the study objectives indicating that they pay more attention to prevention. This might be reflecting the fact that females are more sensitive to AIDS as the prevalence of disease is generally higher in women. Both medical and non-medical

students had similar significant performance in educational programme.

According to the recent report of UNAIDS, 15-24 year age groups account for about fifty percent of all new HIV infections worldwide.<sup>10</sup> Thus, preventive strategies addressed at youth is likely to yield best results, as they are one of the major high risk groups in the community.<sup>11-14</sup>

In conclusion, short term training courses and continuous educational programmes (i.e. peer education, etc) should be provided to young students in the universities and schools through the course materials promoting the awareness and attitude of youth to this ever-increasing health problem.

## ACKNOWLEDGEMENTS

We would like to thanks Research Office of Tabriz University of Medical Sciences for financial support of this project. The completion of this work would have been not possible without the help and assistance of Dr. Khoshbaten, Dr. Alizadeh, Dr. Fakhari, Dr. Varshochi, Dr Ershadmanesh, Dr Khodaii, Dr Dehghani, Dr. Mirzaii, Dr. Rajaii, Dr. Sadigi, Mr. Mosharkesh and Mis Salek.

## REFERENCES

1. Kmietowicz Z. Global efforts to control aids are entirely inadequate. *BMJ* 2003; 327:1246.
2. Newsletter of Aids, Management and Champion of disease, Ministry of health and Medical education undersecretary for medical education and university affairs, Nov-2004.
3. Proposal draft of strategic plan for prevention of HIV infection in Iran from 2002-2006 (published by the Ministry of Health, Iran).
4. AIDS epidemic update. 2003 – December (WHO – UNAIDS)
5. Dolan KA et al. HIV education in a Siberian prison colony for drug dependent males. *Int J Equity Health*. 2004;21: 3-7.
6. [http://www.bbc.co.uk/persian/science/story/2003/10/031008\\_shr-si-aids.shtml](http://www.bbc.co.uk/persian/science/story/2003/10/031008_shr-si-aids.shtml).
7. Kelly JA et al. Distance communication transfer of HIV prevention interventions to service providers. *Science* 2004;24 305(5692):1953-5.
8. Kinsler J et al. Evaluation of a school-based intervention for HIV/AIDS prevention among Belizean adolescents. *Health Educ Res*. 2004 Jun 15.
9. Norr KF. Impact of peer group education on HIV prevention among women in Botswana. *Health Care Women Int*. 2004 ;25(3):210-26.
10. Report on the global AIDS epidemic “Executive summary”. 2004; [http://www.unaids.org/bangkok2004/GAR2004\\_htm/Execsummaryen/Execsum\\_OO\\_en.Htm](http://www.unaids.org/bangkok2004/GAR2004_htm/Execsummaryen/Execsum_OO_en.Htm).
11. Peltzer K. Opinion on AIDS prevention and education among rural secondary school pupils in the northern province of South Africa. *Psychol Rep*. 2000 Oct; 87(2):593-5.
12. Guo lei, SU Linzhi, Wang Mai Liu Yan, Wu Wenyuan. HIV/AIDS prevention education teacher's Guide. Unicef, 2001; 58-61.
13. Amirkhanian YA et al. HIV prevention nongovernmental organizations in Central and Eastern Europe: programs, resources and challenges. *Cent Eur J Public Health*. 2004 Mar; 12(1):12-8.
14. Powell HL et al. The effect of family and peer communication on college students' communication with dating partners about HIV and AIDS. *Health Commun*. 2004; 16(4):427-49.

