

<http://www.pjbs.org>

**PJBS**

ISSN 1028-8880

**Pakistan  
Journal of Biological Sciences**

**ANSI***net*

Asian Network for Scientific Information  
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

## On Attitude towards HIV/AIDS among Iranian Students (Case Study: High School Students in Shiraz City)

Majeed Movahed and Seddigheh Shooa  
Department of Sociology, Shiraz University, Shiraz, 7194685115, Iran

**Abstract:** Young people are of particular importance in state policies against AIDS. The present study investigated the attitude toward HIV/AIDS and related socio-cultural factors among 600 high school students in Shiraz, Iran. The method of sampling is a stratified one and the instrument for collecting data is a self-administrated questionnaire. In this research, attitude has three dimensions-knowledge, emotion and tendency to action. Descriptive statistics showed that students did not have enough knowledge about HIV/AIDS. The 44.3% of students had low knowledge, 36.9% moderate knowledge and only 18.8% had high knowledge. Also the results indicated that attitude for 69.8% of student has in middle level, 15.4% positive and 14.9% negative. Moreover, results suggested that loyalty to Islamic religious beliefs have an important role on attitude toward this disease. Major of study, sex, mother's occupation and use of some mass media such as books and newspapers were other main influencing factors in the students' attitude. Furthermore, this study showed that parent education, major of study, father's occupation and use of books and the internet are the most important variables affecting on the participants' knowledge. Age, sex, parents' education, religious beliefs, use of some mass media such as TV, the internet, newspapers, satellite and books affect emotion. Finally, there is a relationship between religious beliefs, sex and major of study, use of satellite, television, radio and books with tendency to action.

**Key words:** Attitude, HIV/AIDS, Iran, knowledge, students

### INTRODUCTION

At about some time that the world was apparently ride of smallpox become apparent HIV/AIDS. This newer disease is worse than the eliminated (Weeks, 2002). Many years have passed since the HIV epidemic has been a threat to mankind around the world. It has been increased at an alarming rate since the first cases were reported in the early 1980s (Yayeh *et al.*, 2003). The first case of HIV in Iran was reported in 1987 (Zamani *et al.*, 2005) this was followed by a rapid increase in number of cases (World Bank, 2003). According to Ebrahimi (2004) globally more men are infected with HIV than women. Only 5% of the total HIV positive patients are women about 46% of whom are married. More than 70% of married women were infected by their husbands. The most common transmission mode in women is sex and in men is drug use. Based on the most recent data published by the Center for Disease Control (2009) of the Ministry of Health and Medical Education 19435 people of Iran are infected by HIV/AIDS including 6.7% women and 93.3% men. According to data 69.6% of transmission originated from addiction and injection, 8.2% from sexual relations,

1.3 from blood, 0.6% from mother to child and 20.3% was reported as being unclear.

As HIV/AIDS is socially patterned, the society plays a great role in its transmission. Although, HIV risk has been well documented in terms of individualized behavior (risk behaviors), there are many factors that contribute to the spread of HIV/AIDS, such as easier access to narcotic drugs, over-crowded prisons, migration and urbanization, poverty, poor quality of health services, misunderstanding of religion, improper old tradition, lack of knowledge, etc. On the other hand, HIV/AIDS has a potential impact on economic growth, development, demographic factors and subjects to relate to women (World Bank, 2003).

Much research has been conducted on this issue (Chang *et al.*, 2005; Tavoosi *et al.*, 2004; Yayeh *et al.*, 2003; Neupane and Nichols, 2003; Chen *et al.*, 2003; Hajian-Motlaq *et al.*, 2003; Montazeri, 2005; Lal *et al.*, 2000; Okojie *et al.*, 1995).

Tavoosi *et al.* (2004) investigated knowledge and attitude towards HIV/AIDS among 4641 Iranian high school students in Tehran. In this study, knowledge level was associated with students' attitudes and discipline

( $p < 0.001$ ) and the entire student's knowledge level seems to be moderately high and misconceptions about the routes of transmission were common.

Montazeri (2005) studied knowledge and attitude toward HIV/AIDS among the general public in Tehran. This study used a short questionnaire for collecting the data through random sampling of 1172 individuals. Respondents had a fairly good to excellent knowledge about AIDS. The majority of the respondents (87%) said that the mass media including radio, television and newspapers were the main source of their information about HIV/AIDS. In general, they have fairly good knowledge and a positive attitude toward AIDS and people with AIDS.

Chang *et al.* (2005) in an investigation examined HIV knowledge, perceived risk and sexual behavior of 370 undergraduate students in selected universities in Southern Nigeria. Results from MANOVA confirmed that females had significantly higher overall HIV knowledge than males ( $p = 0.03$ ). In addition, females had significantly higher knowledge on the risk of HIV transmission through oral sex ( $p = 0.001$ ) than males. Females scored higher on the erroneous belief that antibiotics protect; a person from HIV ( $p = 0.008$ ). Females showed greater knowledge in the risk of needle sharing in steroid use ( $p = 0.001$ ), but less knowledge on the erroneous assumption that women are tested for HIV during their Pap smear assessments ( $p = 0.004$ ). T-test on sexual behavior risk confirmed that males engage in more risky behaviors ( $p = 0.002$ ) than females. T-test showed a significant gender difference with males reporting greater overall susceptibility for HIV than females ( $p = 0.009$ ).

Xiaodong *et al.* (2007) assess students' knowledge, attitudes and practices on HIV and AIDS. A questionnaire was administered to a cross section of 259 Chinese undergraduates. Respondents were asked to provide information about knowledge and attitudes about HIV/AIDS. Study results indicated that the majority of undergraduates had a moderate level of HIV and AIDS knowledge, acceptance and attitudes towards people with HIV and AIDS. Boys had more acceptance and positive attitudes towards people with HIV and AIDS than girls. Medical students performed better (more knowledgeable and accepting) than non-medical students.

In this study, we have investigated the impacts of knowledge, emotion and tendency towards HIV/AIDS as dimensions of attitude and also relationship between attitude and these dimensions with some of important socio cultural factors.

## MATERIALS AND METHODS

The study was conducted on the survey method in Shiraz City among high school students grade 2-4 (2008). The total number of students was 43,290. The cross sectional study was conducted to access the knowledge, emotion and tendency to action of the population on HIV/AIDS. Systematic sampling with stratified sampling method was used in this study because it offers the possibility of greater accuracy by ensuring that the proper number is drawn from homogenous subsets of population. According to Lin table and consideration of 0.95 confidence level and 0.04 reliability, 605 students were selected as research sample. The collected data was analyzed via SPSS software and we will use of some appropriate statistical calculation such as One-Way ANOVA, independent T test, Linear Regression, Multiple Regressions, Analysis factors and so on (Alen and Duncan, 2001).

Reliability of the questionnaire used in this research has been examined using item analysis method and alpha coefficient on 50 questionnaires in the pilot study. All data had an acceptable reliability (more than 0.70). The questionnaire in this research included 120 items, the face validity of which was confirmed by experts.

## RESULTS

The data show that there are 238 males (40%) and 367 females (60%) in the sample. Range of age was between 15 to 21. Also, most of the students' parents have a high school diploma or certificate. The results points out that 26.8% of the students are in the field of humanities, 37.4% mathematics and 35.9% in the field of science.

Table 1 shows the level of knowledge about HIV/AIDS, which was medium for 36.9% of students, low for 44.3% and high for 18.8%. About emotion to HIV/AIDS; the results suggest that the majority of students (69.8% of females and 66.2% of males) are in medium level, 17.7% have positive emotion that hinders them from risky actions and 13.9% have negative emotion that encourages them to take risky action. The results show that negative emotion among boys is more than girls. Also distribution by tendency to low risk indicates

Table 1: Distribution of students by attitude (knowledge, emotion and tendency to safe action)

Variables				
Level	Knowledge	Emotion	Tendency to safe action	Attitude
High	114 (18.8)	107 (17.7)	115 (19.0)	93 (15.4)
Medium	223 (36.9)	414 (68.4)	398 (65.8)	422 (69.7)
Low	268 (44.3)	84 (13.9)	92 (15.2)	90 (14.9)
Total	605 (100)	605 (100)	605 (100)	605 (100.0)

Values in brackets indicate percentage

**Table 2: The test of relation between age and attitude toward HIV/AIDS and its dimensions**

Variables	Statistics							
	R	R <sup>2</sup>	B	Beta	F-value	Sig.	t-value	Sig.
Knowledge	0.022	0.000	0.105	0.022	0.281	0.596	0.530	0.596
Emotion	0.130	0.017	-1.13	-0.130	10.300	0.001	-3.21	0.001
Tendency								
To action	0.032	0.001	-0.005	-0.032	0.631	0.427	-0.794	0.427
Attitude	0.055	0.003	-1.67	-0.055	1.853	0.174	-1.36	0.174

that the tendency to low risk action for the majority of students was at medium level, for 19% of students was high and for 15.2% of them was low.

The data show that association between age and attitude toward HIV/AIDS according to Pearson correlation is -0.055, a weak negative association which is not significant. In dimensions of attitude, there is not a significant relationship between knowledge and tendency to action about HIV with age. However, the relationship between age and emotion toward HIV/AIDS is significant. To be more precise, a regression formula was used to identify a more accurate relationship. The findings of regression are represented in Table 2. As shown in the Table 2, the relationship between emotional dimension and age, the low significance value for the F statistic indicates that independent variable explains the variation of student's emotion very well.

The findings of this study points to the fact that the increase in age results in an increase in knowledge about HIV/AIDS. However, older students' emotion and tendency to low risk action also decrease. Only the relationship between age and emotion is significant. The positive relationship between age and knowledge reveals that as students grow older their knowledge on AIDS increases. So, a positive relationship is expected to hold between age and knowledge. This relationship is found to be non-significant in this study.

But the findings showed that as the age increases, the emotions and tendency to risky actions also increases.

Table 3 shows the relationship between students' sex and their attitude, along with its three dimensions toward HIV/AIDS. The results of equal variance are not assumed because the significance value is low (Table 3). The t-statistics is 3.347. This value is significant therefore it can be concluded that the mean difference of attitude among male and female participants is significant. With regard to dimensions of attitude, male and females students differ significantly in their tendency to action and emotion, but not in their knowledge. The findings show that males have more information (but not significantly more) about the illness than females.

Table 4 shows the relationship between father's education and attitude toward HIV/AIDS. Father's

**Table 3: Independent t-test for sex and attitude toward HIV/AIDS**

Variables	Sex	Mean	SD	t-test	Sig.
Knowledge	Female	66.4657	14.40888	-0.980	0.328
	Male	67.6160	13.89643		
Emotion	Female	78.3879	9.98269	-0.980	0.000
	Male	72.8317	12.36365		
Tendency to action	Female	80.3950	11.90730	3.175	0.001
	Male	76.9687	13.59181		
Attitude	Female	225.2486	25.51350	3.347	0.001
	Male	217.4164	31.69033		

**Table 4: Pearson correlation between father education and different dimensions of HIV/AIDS**

Statistics	Variables			
	Knowledge	Emotion	Action	Attitude
Pearson correlation	0.130	0.076	0.004	0.096
Sig. (2-tailed)	0.002	0.068	0.922	0.021
N	577	577	577	577

**Table 5: Correlation between mother education and positive attitude toward HIV/AIDS**

Statistics	Variables			
	Knowledge	Emotion	Action	Attitude
Pearson correlation	0.101	0.092	0.019	0.096
Sig.	0.016	0.028	0.651	0.021
N	576	576	576	576

education and attitude toward HIV/AIDS are positively and significantly related to each other. But the low value of Pearson correlation ( $r = 0.021$ ) indicates that the correlation between these two variables is a weak one. With regard to the dimensions of attitude there is a significant relationship between knowledge and tendency to action about HIV with father's education. But the relation between student's father's education and tendency to low risk action and emotion toward HIV/AIDS is not significant. So, although father's education influences attitude and knowledge, it can not significantly influence emotion and tendency to action.

Table 5 shows the relationship between mother's education and attitude toward HIV/AIDS. The Pearson correlation is positive and significant. The amount of correlation is 0.096, a fairly a weak one. Dimensions of attitude, i.e., knowledge, emotion and tendency actions, the relationship between mother's education and knowledge and emotion is significant, but the relationship between tendency to low risk actions and mother's education is non-significant. The reason for such findings can be the same as those of the father's education.

Table 6 shows the relationship between major and attitude towards HIV/AIDS. The result of one-way analysis of variance shows that since F value is significant ( $p < 0.05$ ) there is a significant difference in the mean scores of the students' attitudes by the field of study.

Table 6: The test of relation between student's major and different dimensions of attitude by one way ANOVA

Variables	Statistics				
	Sum of squares	df	Mean square	F-value	Sig.
Knowledge	4755.2	2	2377.6	12.21	0.000
Emotion	0.683	2	0.342	1.086	0.338
Tendency to action	1019.7	2	509.85	3.187	0.042
Attitude	3.191	2	1.596	5.343	0.005

Table 7: Descriptive statistic of relationship between major of study and different dimensions of attitude

Variables	Major of study	N	Mean	SD
Knowledge	Humanities	162	20.06	4.928
	Mathematics	226	21.50	4.267
	Science	217	22.34	4.300
Emotion	Humanities	162	54.83	7.837
	Mathematics	226	54.11	8.855
	Science	217	55.69	7.501
Tendency to action	Humanities	162	41.49	6.494
	Mathematics	226	40.24	7.028
	Science	217	41.73	6.138
Attitude	Humanities	162	218.60	28.15589
	Mathematics	226	219.71	29.65878
	Science	217	227.41	26.33569

Table 8: Schaffer's test between attitude and knowledge with major of study

Major	N	Subset for alpha = 0.05 for attitude		Subset for alpha = 0.05 for knowledge	
		1	2	1	2
Humanities	162	218.60		62.673	
Mathematics	226	219.71		67.1737	

As it is presented in Table 7, students of science had more information on the disease than students of mathematics and humanities. This can be attributed to their syllabus in biology, which includes topics on AIDS for science students. Previous pieces of research in Iran and other countries confirm the findings of this study. These findings are represented in Table 7.

The Schaffer's test (Table 8) reveals that the mean scores of attitude of the students in experimental science (M = 227.41) is significantly more than that of the students in literature and humanities (M = 219.71) and physics and mathematics (M = 218.60).

The relationship between attitude towards HIV/AIDS along with its three components and each mass media is presented in Table 9. Table 9 reflects the use of mass media such as film, book, newspaper, magazine, satellite; Internet etc. will cause an increase in information about HIV/AIDS among high school students. However, use of television and radio did not have a positive effect on increasing the student's information about this disease, mostly because of lack of efficiency of such mass media in introducing HIV/AIDS due to the existing culture in the society.

Use of films, newspapers, books and magazines could cause a hindering emotion toward HIV/AIDS. In

Table 9: Spearman correlation coefficient between use of mass media and different dimensions of attitude toward HIV/AIDS

Mass media	Correlation and sig.	Knowledge	Emotion	Tendency to action	
				Attitude	
Radio	Correlation	0.117	0.004	0.093	0.016
	Sig.	0.055	0.928	0.023	0.702
Book	Correlation	0.180	0.083	0.113	0.056
	Sig.	0.086	0.042	0.005	0.167
Internet	Correlation	0.034	-0.079	-0.031	-0.002
	Sig.	0.005	0.050	0.451	0.961
Newspaper	Correlation	0.055	0.125	0.094	0.095
	Sig.	0.180	0.002	0.021	0.020
Satellite	Correlation	0.018	-0.087	-0.075	-0.059
	Sig.	0.664	0.033	0.050	0.145
TV	Correlation	0.071	0.173	0.157	0.175
	Sig.	0.050	0.000	0.000	0.000
Film	Correlation	0.067	0.044	-0.012	0.046
	Sig.	0.099	0.276	0.769	0.259

Table 10: Correlation between students' loyalty to religious beliefs and attitude, along with its three dimensions toward HIV/AIDS

Statistics	Variables			
	Knowledge	Emotion	Action	Attitude
Pearson correlation	0.074	0.594	0.548	0.519
Sig. (2-tailed)	0.068	0.000	0.000	0.000
N	605	605	605	605

contrast, use of the Internet and satellite causes an unsuitable emotion among students, which could pave the way for being affected by HIV/AIDS. This is mostly because of the immoral nature of the programs on such media. On the other hand, based on the results, reading books and magazines could reduce tendency to risky behaviors among students significantly, while the Internet and satellite had the opposite effect. However, such relation has not been proven (Sig.<0.05). It is worth mentioning that although television programs could not transmit suitable information about HIV/AIDS effectively, it was efficient in the aspect of emotion and tendency.

Table 10 presents the correlation between religious beliefs and attitude toward HIV/AIDS. This correlation is positive and significant. The amount of correlation is 0.52 and it is strong. The R in Table 11 indicates the explained proportion of the variation of attitude toward HIV/AIDS by religious beliefs as an independent variable. The explained proportion is 0.519; this amount indicates a very high power of independent variable in explaining dependent variable. Beta between religious beliefs and attitude is 0.51. The value of Beta indicates that by changing one unit in religion value, attitude will change 51%.

Among independent variables (age, sex, family size, migration, parent's education, parent's occupation, family income, major of study, mass media and religious beliefs), which were forced into regression equation, 5 variables were included based on the magnitude of beta weight and the level of significance. Standardized regression

Table 11: The test of relation between religious beliefs and attitude, along with its three dimensions by regression

Variables	Statistics							
	R	R <sup>2</sup>	B	Beta	F-value	Sig.	t-value	Sig.
Knowledge	0.074	0.006	0.049	0.074	3.344	0.068	1.829	0.068
Emotion	0.594	0.353	0.704	0.594	328.391	0.000	18.12	0.000
Tendency to action	0.548	0.300	0.527	0.548	258.170	0.000	16.06	0.000
Attitude	0.519	0.270	2.144	0.519	222.7	0.000	14.92	0.000

Table 12: Model for predict attitude toward HIV/AIDS

Variables	Statistics					
	B	Beta	t-value	Sig.	R	R <sup>2</sup>
Constant	119.943		10.145	0.000	0.579	0.335
Religious beliefs	2.193	0.539	11.141	0.000		
Mother education	1.462	0.190	3.643	0.000		
Humanities major	-8.952	-0.151	-3.080	0.002		
Use of book	3.030	0.159	3.267	0.001		
Mother of occupation	8.629	0.113	2.186	0.030		

F = 28.226, Sig. = 0.000

coefficients were compared to determine which of the independent variables were more important in relation to the dependent variable in the following; the impact of independent variable on attitude is explained on the basis of magnitude of beta weight.

Table 12 shows that a religious belief is the first important variables in connection with attitude toward HIV/AIDS. The value of .53 for its beta weight shows that 53% of attitude changes are explained by religious beliefs. Also, the positive sign for regression coefficient indicates that there is a positive relationship between the two variables.

The second variable is students' mother's education. The value of 0.19 for its beta weight shows that 19% of attitude changes are explained by this variable. Also the positive sign for regression coefficient indicates that there is a positive relationship between the two variables. It can be concluded that the more the level of mother's education, the more positive the student's attitude toward HIV/AIDS.

The third variable is the major of study (human science). The value of -.15 for its beta weight shows that 15% of attitude changes is expected by this variable. Also the negative sign for regression coefficient indicates that majoring Humanities students have negative attitude in comparison to other majors.

The fourth variable is use of books. Since the value of standardized regression coefficient equals to 0.15, it shows that 15% of attitude changes are expected by this variable. The square (coefficient of determination) value as a whole is 0.33, implying that 33% of the variance in attitude is explained by the 5 independent variables entered in the equation. The equation for multivariate analyses is: Attitude = 119.943 + 0.539 religious

beliefs + 0.190 Mother's education -0.151 Humanities major + 0.159 rate use of book + 0.113 Mother's occupation.

## DISCUSSION

The first step to prevent of HIV/AIDS is increase the knowledge about this disease (Adenik and William, 2009). AIDS is more a problem of attitude than knowledge alone (Akpabio *et al.*, 2009). The findings of the present research show that despite the fact that different variables have been able to explain the attitude toward HIV/AIDS to some extent; religious beliefs have played the most effective role in explaining this attitude. Lal *et al.* (2000) found that Iran is a religious and transitional society so it has kept its traditions and religious beliefs. The religious culture of Iran shapes the beliefs that counteract the transmission of HIV/AIDS, for example Islam prohibits illicit sex completely and many Muslim leaders ban the use of drugs, psychedelic drugs and alcoholic drinks that lead to this disease. Islam emphasizes keeping healthy and refusing any action which leads to HIV/AIDS. Although, religious beliefs have not had a positive role in making the students aware of HIV/AIDS, they have had a good effect on their positive emotion and tendency toward safe action. The students who have religious beliefs have shown tendency to safe action. The reason that a person who has strong beliefs avoids dangerous action is because religion prohibits this action.

So, every society should try to strengthen religious values. Unfortunately, in society some topics are taboo and school teachers or parents still believe that talking about sex or addiction to young students encourages them to do dangerous actions. Therefore, teachers and parents do not play their role properly. Young people are increasingly appreciated as a key resource for changing the course of the HIV epidemic. Studies have shown that they can be both responsive to HIV prevention programs and effective promoters of HIV prevention action.

There are special reasons as to why young people's involvement is essential for action on HIV/AIDS. Young people's understanding of life is developed both with and among their peers. Friends shape young people's understanding of social relationships, develop negotiation skills and enable them to develop a sense of personal competence and responsibility. This kind of peer support is invaluable for AIDS action, because it can channel correct information about HIV prevention. Moreover, it can draw young people into productive activities, which contribute to increased competence and confidence.

Training and support of parents and adults, responsible for working with/for young people may be required in order to develop their abilities to work more effectively with young people. This finding is a confirmation of the argument by Akpabio *et al.* (2009). Though better knowledge does not necessarily lead to behavioral changes, the researchers believe that repeated talks with teachers and advisors in the classroom about this important subject would have some influence upon a certain percentage of the students.

Also the findings show that there is a significant relationship between student's gender and their attitude toward HIV/AIDS. This is same as Mcmanus and Dhar (2008) reported. The relationship between gender and knowledge about HIV/AIDS is not significant might be the equity of opportunities of access to information. But boys show a greater tendency to unsafe action than girls may be according to cultural factors boys are blamed and hurls than the girls in illegitimate action. On the other hand, the girls are restricted more by their family and society so that it keeps them from illegitimate action to some extent. Since, boys are exposed to more danger than the girls, special training is required for boys. These findings are in line with previous findings. Male students had more tendencies to risky actions and more negative emotions; it can expected idea as the traditional society of Iran imposes more limitations on girls.

The likelihood that a young person will become infected with HIV is influenced by numerous factors related to the individual himself/herself and to his/her environment. Although, today all young people are at risk for HIV, that risk is clearly not shared equally among them. The socio- economic status is an important factor that was studied in this research. The findings show that although the students in high class families watch foreign programs on the Internet and satellite and engage in more risky actions than the student in low level families, they are exposed to less dangerous because of their level of awareness. The mass media is an important factor in preventing and transmitting HIV/AIDS. Montazeri (2005) and Yayeh *et al.* (2003) confirmed such a relationship between use of mass media and knowledge and attitude toward HIV/AIDS and found that it was the main source of information about HIV/AIDS. The findings of the present study show that the foreign mass media such as the internet and satellite increase people's knowledge and level of unsafe activity, because talking about facts directly makes people aware of the dangers involved. But the problem is that they also propagate irreligious culture. The national media have not had an important effect on people because they have not talked directly about this problem. It is considered taboo and hence the media has

chosen to inform people indirectly. However, they have touched upon people's emotion and tendency to action by encourage Islamic beliefs.

It is necessary for the national media to consider this issue more extensively. They must avoid illogical prejudice for the prevention of this disease. Students (as well as the general population) should be informed about all aspects of AIDS by the media, which at present is the most common but not necessarily credible source of information. Coalition of the media, Non-Governmental Organizations (NGOs) that are active in grass-roots level and the politician and religious leaders who understand what is at stake, are needed. There should also be a big push to increase teaching efforts in schools. This type of information is also recommended in other studies. There is considerable rationale to include HIV/AIDS education as an integral part of high school curriculum. Educational advisors, physicians and nurses should discuss with students the modes of prevention of HIV contamination (Gheiratmand *et al.*, 2003).

In addition the findings show that there is a significant relationship between students's major and knowledge about HIV/AIDS Previous research in Iran confirms the findings of this study. Li and Craig (2008) also found that undergraduate nursing students had knowledge levels somewhat higher than those with shorter educational backgrounds.

Results showed that the relation ship between age and knowledge is not significant the main reason for this unexpected finding may be the fact that the age interval in this study was one year, which may not be large enough to reflect any differences. However, the previous studies show that there are substantial and increasing numbers of youth living with HIV (YLH) and they are being identified at younger age (Karon, 1996). The world health organization estimates that 50% of HIV infection occurs among youth 15-24 years old (Goldsmith, 1993). But about relation between age and emotion this finding may be contradictory with to previous findings because as the age and therefore knowledge, increases tendency to risky actions and positive emotions should decrease. The opposite was found to be true in this study. The reason may be the fact that aging is influenced by social factors. It means that older students are more probable to do risky actions than younger students due to their situation in the society. This finding is a confirmation of the argument by Akpabio *et al.* (2009). The relationship between age and tendency to risky actions was found to be positive but not significant and it is due to the fact that these students have not reached the age of action yet. Previous studies also show that adolescent women are at greater risk than adult women because the vagina and cervix of

young women are less mature and less resistant to HIV and other STI (Red Crescent Society Fars Province, 2004).

### CONCLUSIONS

This study shows that the majority of the students did not have enough knowledge about HIV/AIDS and only 18.8% of them have high knowledge about this disease. The emotion and tendency to action for most of them was at medium level. Parents' education, major of study, use of books and internet and father's occupation were the most important variables affecting the participants' knowledge. Student of humanities had the lowest knowledge about the illness in comparison with those of science and mathematics. Also the use of books and the internet increased students' knowledge about this illness. With regard to father occupation, students whose fathers were laborers had the lowest knowledge on AIDS. Students whose mothers were more educated had better knowledge of HIV/AIDS.

Age, sex, parents' education, religious beliefs, the use of some mass media such as TV, the Internet, newspaper, satellite and book were the most important variables affecting on the participants' emotion toward HIV/AIDS. In these variables with an increase in religious beliefs, parents' education, age and use of TV, newspaper and books, students' emotions are increased. Age increase however decreases their emotion, internet and satellite had a negative effect on emotion and female students show the better emotion about this disease.

Religious beliefs, sex, major of study and using satellite and television, radio, book were the most important variables affecting tendency to action. While the effect of religious beliefs, television, radio and book was positive in decreasing tendency to risky actions, satellite had an increasing effect on tendency to risky actions.

### REFERENCES

- Adenik, O. and W. William, 2009. Changes in knowledge and attitudes among junior, secondary students exposed to the family life and HIV education curriculum in Lagos State, Nigeria. *Afr. J. Reprod. Health*, 3: 37-46.
- Akpabio, B., C. Michael and B. Abosede, 2009. Effects of school health nursing education interventions on HIV/AIDS-related attitudes of students in Akwa Ibom State Nigeria. *J. Adolescent Health*, 44: 118-123.
- Alen, B. and C. Duncan, 2001. *Quantitative Data Analysis with SPSS Release 10 for Windows*. 1st Edn., Routledge Publishers, Philadelphia, ISBN: 0-415-24399-8.
- Center for Disease Control, 2009. HIV/AIDS in Iran (Cumulative Statistics). Center for Disease Control, Tehran, Iran.
- Chang, L., E. Eke-Huber, S. Eaddy and J. Colling, 2005. HIV knowledge, perceived susceptibility for HIV and sexual behaviors. *J. CSD*, 23: 214-224.
- Chen, J., C. Shengli and M.K. Choe, 2003. Who has correct information and Knowledge about HIV/AIDS in China? *Asia Pac. Popul. J.*, 18: 25-38.
- Ebrahimi, T.M., 2004. Overview on HIV/AIDS and women in Iran Tehran. Midwifery Principal Officer, Ministry of Health and Medical Education, Tehran, Iran.
- Gheiratmand, R., R. Navipour, M.R. Mohebbi, K.M. Hosseini, M. Motaghian-Monazzam and A.K. Mallik, 2003. A country study to review existing capacity building and management of the training of teachers on preventive education against HIV/AIDS in the schools in I.R. Iran. [http://www.neshat.org/html\\_pages/a\\_country\\_study\\_to\\_review\\_existil.htm](http://www.neshat.org/html_pages/a_country_study_to_review_existil.htm).
- Goldsmith, M.F., 1993. Invisible epidemic now becoming visible as HIV/AIDS pandemic reaches adolescent. *J. Am. Med. Assoc.*, 27: 16-19.
- Hajian-Motlaq, N., S. Farsh and E. Abdollahi, 2003. A study of knowledge and attitude between High School Students in Savojbolagh. *J. IUMS*, 41: 393-400.
- Karon, J.M., 1996. Prevalence of HIV Infection in the United States. *J. Am. Med. Assoc.*, 176: 1626-1633.
- Lal, S.S., R.S. Vasan, P. Sancarasarma, 2000. Knowledge and attitude of college students toward HIV/AIDS, sexually transmitted diseases and sexuality. *Natl. Med. J. India*, 13: 231-236.
- Li, Y. and S. Craig, 2008. Chinese nursing students' HIV/AIDS knowledge, attitudes and practice intentions. *Applied Nurs. Res.*, 21: 147-152.
- Mcmamus, A. and L. Dhar, 2008. Study of knowledge perception and attitude of adolescent girls towards STI/HIV, safer sex and sex education (cross sectional survey of urban adolescent school girls in South Delhi, India. *BMC Woman's Health*, 8: 12-12.
- Montazeri, A., 2005. AIDS knowledge and attitudes in Iran: Results from a population-based survey in Tehran. *Patient Educ. Counsel.*, 57: 199-203.
- Neupane, S. and D. Nichols, 2003. Knowledge and beliefs about HIV/AIDS among young people in urban area. *Asia-Pacific Popul. J. Nepal*, 14: 39-52.
- Okojie, O.H., O. Ogbeide and A. Nwulia, 1995. knowledge, Attitude and Practice (KAP) towards AIDS among civil servants in Nigeria. *Soc. Health*, 1: 19-22.
- Red Crescent Society Fars Province, 2004. 47 Questions and 47 answers about HIV/AIDS. Shiraz, Iran.



- Tavoosi, A., A. Zaferani, A. Enzevaei, P. Tajik and Z. Ahmadinezhad, 2004. Knowledge and attitude towards HIV/AIDS among Iranian students. *BMC Public Health*, 4: 17-17.
- Weeks, J.R., 2002. *Population: An Introduction to Concepts and Issue*. 2nd Edn., Wadsworth Publishing, New York, ISBN: 0534529763.
- World Bank, 2003. *Averting AIDS Crises in Eastern Europe and Central ASIA*. World Bank, Washington, DC.
- Xiaodong, T., P. Jingju, Z. Dong, C. Wang and C. Xie, 2007. HIV/AIDS knowledge, attitudes and behaviors assessment of chinese students: A questionnaire study. *Int. J. Environ. Res. Public Health*, 4: 248-253.
- Yayeh, N., G. Beteariam, B. Daniel and B. Mebratu, 2003. A community based study on knowledge, attitude and practice (KAP) on HIV/AIDS in Gambella town Ethiopia. *Health Dev.*, 3: 205-213.
- Zamami, S., M. Kihara, M. Gouya, M. Vazirian, M. Ono-Kihara and E. Razzaghi, 2005. Prevalence of and factors associated with HIV-1 infection among drug users visiting treatment centers in Tehran, Iran. *Epidemiol. Soc.*, 7: 709-716.