



ORIGINAL ARTICLE

Knowledge of modes of transmission and prevention of AIDS among referred to hospitals for injection and dressing in Iran

***Mohammad Mehdi Saeidi**, ²**Mohammad Hossein Sorbi**, ³**Zeynab Arabi**, ⁴**Nilofar Ahmadi Befroyi**

¹Master of Science of Personality Psychology, Karaj Islamic Azad University, Karaj, Iran

²Department of Clinical Psychology, Faculty of Medicine, Kermanshah University of Medical Science, Kermanshah, Iran

³Master of Science of Educational Sciences, Yazd Islamic Azad University, Yazd, Iran

⁴Master of Science of Family Counseling, Faculty of Psychology, Sahid Beheshti University, Tehran, Iran

E-mail: Mmehdisaeidi@yahoo.com

ABSTRACT

This study was done to assess the knowledge of HIV transmission and prevention of the Iranian who had been referred to the injection and dressing parts of hospitals. The sample consisted of 1100 participants who referred injection and dressing parts from early July 2013 to late June 2014 in hospitals of Yazd, Iran. Each of those 18 to 50 years-old individuals, who was selected by convenience sampling method, a questionnaire measuring the transmission and prevention of HIV was given to them to complete it. Of this number, 53.4% were male and 46.6% were female that 86.7% were married. The mean age of the participants was 32.3 ± 7.8 . Of this number, the most accurate results about knowledge of HIV transmission was 96% transmission through contaminated blood and the least one was 42% transmission through breast milk. The most awareness of HIV prevention was 97% health education in the community and the least one was 22.1% Non-food importing from infected countries. Results showed that Participants had good knowledge regarding modes of transmission and prevention of AIDS and there was no significant difference between men and women. The amount of HIV information was better among married participants than single ones ($p < 0/05$). However, that's better to give them appropriate information about transmission and specially prevention and deal with AIDS in environments such as hospitals and life.

Key words: Attitude, Awareness, Injection and Dressing, AIDS

Received 17.12.2014

Revised 09.01.2015

Accepted 22.02. 2015

INTRODUCTION

Undoubtedly, AIDS has been one of the world's greatest scourges after the Second World War [1]. The first deadly virus was diagnosed in America in 1980. At the beginning, the disease was just seen in homosexuals but after a while has taken all segments of society [2,3]. Hence, AIDS within its short period was faced with numerous reports around the world that the results showed the presence of infection with the disease in all countries [1]. The roots of this infectious disease has been growing up and getting stronger every day in the world and it's facing with the increase of orphans families, Widows, Poverty, Prostitution, violence, mental illness, unemployment and the loss of social and economic status [4].

The definition of AIDS is an Acquired Immune Deficiency syndrome that is transmitted by Human immunodeficiency virus (HIV). There are different forms of HIV transmission that is transmitted from one person to another by Blood or blood products, vaginal discharge and Semen. The disease range from mild Viremia to severe defects associated with opportunistic infections threatening the patient's condition [3-5]. Thus, AIDS is the leading cause of death due to infectious diseases and also is known as the fourth cause of death all over the world [6].

While most of the health problems seen in children and the elderly, AIDS occur at ages around 20 to 49 years when they can have the greatest amount of success in community. This situation could lead to social, economical and political instability in community [5,7].

At present, Asia and Iran are faced with the danger of this disease [8]. According to the World Health Organization predicts, HIV infection rates in Iran will reach 10 percent in 2020 [9]. Hence, Iran is among the countries considered high risk exposure to HIV. The main reason for this rapid growth is may be due

to the geographical situation of Iran. In fact the rate of infection in the northern neighborhoods, the East Asia and the Eastern Mediterranean Region and also a long border with Afghanistan and Pakistan which are known as a leading manufacturer of heroin in the world, Iran has faced the problem of transit and drug trade and plays a role in the spread of the disease [10,11].

According to statistics obtained from the Department of Medical Sciences, by early April 2012, 24290 patients with AIDS were identified in Iran that 90.8% were men and 9.2% were women. Also 64.5% of patients were about 25 – 34 when they were infected that had the highest ratio among age groups. 62.5% the intravenous drug using, 21.2% having sexual relations, 3.9% from an infected mother to child transmission and 12.4% of identified cases were unknown transmission and no new cases have been reported through blood and blood products [12].

Due to the rapid transmission of HIV and its features and performance as well as the lack of adequate information about the disease, the basic requirements for giving sufficient information to alter health patterns and appropriate use of health care practices seems necessary. According to the characteristics of the disease, prevention is the best way to control [13,14]. Hence, this study aims to assess knowledge of HIV transmission and prevention of the Iranian who referred the injections and dressing in Yazd hospitals. Furthermore, this study seeks to identify the extent of knowledge about AIDS, approaches for controlling, prevention training and raising awareness of the disease.

MATERIALS AND METHODS

This study was descriptive- sectional that was done to assess the knowledge of HIV transmission and prevention of the Iranian who had been referred to the injection and dressing parts of hospitals in Iran. The sample consisted of 1100 participants who referred injection and dressing parts of two hospitals of Yazd who were about 17-47 years old. These individuals that were presented in medical centers of Yazd from early July 2013 to late June 2014 were selected by convenience sampling method. On arrival to hospital, the participants were invited to join this study and complete the questionnaire by means of their information about AIDS. In fact, this questionnaire had two parts that the first was Demographic information such as sex, age, education level, economical condition, job and some questions about physical condition and disease precedent. The second part was knowledge of AIDS that the questions were retrieved from a questionnaire made in 2002 by Nojomi and his coworkers. Nojomi questionnaire had 32 questions that 16 of them were measured the Knowledge of HIV transmission and the others measured the knowledge of HIV prevention. He achieved the internal consistency and reliability coefficient by 0.77 Cronbach's alpha [20]. Researchers added *I don't know* option besides *Yes/No* options while using this questionnaire in order to accurate grading and more assurance to each of the 32 items measuring HIV. Also, a further question was used to identify the main source of individuals' AIDS information. If people had chosen the correct option they took one score and if had chosen the wrong or *I don't know* option they took zero. The range of scores on both parts of transmission and prevention were 0-16 that the more score showed the more knowledge. In addition, medical and psychological experts' opinions were used to catch content validity, face and grading methods of this questionnaire again.

For ethics in this research, written consent for doing such research were taken from the authorities of both hospitals in Yazd (Shohadaye Kargar Hospital and Ghaemiyeh Medical Center) and then an explanation about the research was given to Supervisors and injections' nurses and wanted them to cooperate. Also assure them that published information will be provided. In addition, before taking the questionnaires, an explanation about research was given to each of participants and assures them about the secrecy of their information. Written informed consent was taken from those who expressed their satisfaction to participate the research and wanted them to answer the questions with sincerity. SPSS16, descriptive statistic (mean, standard deviation, percent), Chi- square and T-test were used to analyze the data.

RESULTS

Of 1100 collected questionnaires among 18 to 50 years-old individuals, 53.4% were male and 46.6% female. The mean age and standard deviation of participants was $32.3 \pm 7/8$. 86.7% were married, 13.3% single, 57.4% diploma, 24.8% under Diploma, 17.8% BA and over, 53.5% had good economical condition, 40.4% average condition and 6.1% poor. Also 28% were self employment which the Chi- square results show that the most job among men were self employment (34.8%) and among women were housewife(48.3%) that this difference is statistically significant ($p < 0.01$).

Table 1: Demographic features of participants (N=1100)

variable	classification	frequency	Percent
gender	Male	587	53.4
	female	513	46.6
marriage	Married	146	13.3
	single	954	86.7
Education level	Under Diploma	273	24.8
	Diploma	631	57.4
	Licentiate and over	196	17.8
Age (year)	<20	44	4.0
	21-30	427	38.8
	31-40	502	45.6
Economical	40<	127	11.5
	Good	444	40.4
	Average	589	53.5
Occupation	poor	67	6.1
	State	302	27.5
	Self-employment	308	28.0
Occupation	Worker	175	15.9
	Workless	44	4.0
	House wife	271	24.6

Table 2 shows the participant's awareness of HIV transmission to the resolution of questions.

Table 2: Participants' knowledge of transmission of HIV to the resolution of questions

Variables (questions)	correct answers	Number of Correct answers	Percent
1. Transmission through contact with contaminated body.	No	649	56
2. Transmission through the bite of mosquitoes	No	495	45
3. Transmission through kissing	No	700	63.6
4. Transmission through contaminated blood	Yes	1056	96
5. Transmission through consumption of contaminated food	No	615	55.9
6. Transmission through sexual intercourse with an infected person	Yes	1055	95.9
7. Transmission by inhalation of contaminated air	No	730	66.4
8. Transmission through contaminated syringes and needles	Yes	1033	93.9
9. Transmission through participation in dinnerware	No	582	52.9
10. Transmission through the barbershop and shave stuff	Yes	966	87.7
11. Transmission through secretions from the throat and mouth	No	420	38.2
12. Transmission through contaminated dental instruments	Yes	1044	94.9
13. Transmission through sexual intercourse with infected persons of the same sex	Yes	1023	93
14. Transmission through Clothing	No	754	68.5
15. Transmission through infected mother to the fetus during pregnancy	Yes	875	79.5
16. Transmission through breast milk to newborn	No	462	42

As table 2 shows, the most percents of correct answers among participants about awareness of AIDS transmission were transmission through injecting contaminated blood (96%) and through sexual intercourse with infected persons (95.5%). The least percents of correct answers were transmission through breast milk to new born (42%) and through the bite of mosquitoes (45%). Mean and standard deviation of the whole HIV transmission's scores was 11.13 ± 3.12 that 63.5% had enough transmission awareness, 33.5% average awareness and 3% had inadequate awareness. Table 3 shows the participants' knowledge of AIDS prevention to the resolution of questions.

Table 3: Participants' knowledge of AIDS prevention to the resolution of questions

Variables (questions)	Correct answers	Number of correct answers	percent
1. Isolation of infected persons from the community	No	270	24.5
2. Health education in the community, especially for young people	Yes	1067	97
3. Immunize people against diseases by needle	No	416	37.8
4. Accuracy of blood and blood products imported from infected countries	Yes	1033	93.9
5. Abstaining from illicit sexual relations.	Yes	1042	94.7
6. Control and limit the entry of contaminated sites	Yes	906	82.7
7. Being Loyal to Family Foundation and wife	Yes	928	84.4
8. The use of disposable medical devices	Yes	1030	93.6
9. Refusing Blood Transfusion and its products as much as possible	Yes	797	72.5
10. Drug therapy in infected areas	No	246	22.4
11. Educating injecting drug users	Yes	1007	91.5
12. Hospitalize patients	No	361	32.8
13. Preventing infected mothers becoming pregnant	Yes	863	78.5
14. Identification of infected persons	Yes	1009	91.8
15. Blood supply within the country and on the accuracy of the blood donor	Yes	998	90.7
16. Non-food importing from infected countries	No	243	22.1

Results of table 3 shows that health education in the community, especially for young people with 97% correct answers and also abstaining from illicit sexual relations with 94% correct answers were the best ways of HIV prevention. The least correct answers were non-food importing from infected countries (22.1%) and drug therapy in infected areas options (22.4%). Mean and standard deviation of the whole HIV preventions' scores was 11.21 ± 2.36 that 69% had enough prevention awareness, 27.8% average awareness and 3.2% had inadequate awareness.

Results from T-test showed that there was no significant difference between men and women knowledge of modes of transmission and prevention of AIDS ($p > 0.05$). But results between two groups of married and single persons showed that married ones have more knowledge of HIV transmission ($p = 0.001$, $t = -5.8$) and HIV prevention ($p = 0.001$, $t = -10.8$) than single ones.

Table 4: The results of the most important sources of information about AIDS

Source of Data	Number	Percentage
Books	254	23.1
TV & Radio	627	57.0
School & University	127	11.5
Parent	12	1.1
Friends	47	4.3
Others	33	3

The content of table 4 shows that most sources of information about AIDS symptoms for participants were TV and radio (57%).

DISCUSSION AND CONCLUSIONS

In this study, 1100 adults referred to hospital for injections and dressings were studied for AIDS awareness. The response rate to the questions by respecting how to collect was 100%. Overall, 63.5% of participants had sufficient transmission knowledge, 33.5% average and 3% insufficient. The knowledge of those surveyed was roughly equal to the amount of knowledge of ways to prevent this disease. These data indicate that although the current situation and future of the Iranian people who are facing the risk of HIV transmission is a serious risk, the amount of information about routes of transmission of the disease to any person is in a good level. However, in some cases, such as the transmission of infection to the baby through breast milk by 42% and transmitted through the bite by 45% were the lowest correct answers about transmission.

Similarly, and in line with Nojomi and colleagues (2002) who examined the rate of AIDS knowledge among high school students in Iran. They found that 5.77% of all high school students had a good knowledge, and 22.3% had average knowledge. The data rate of transmission of HIV was higher in the cases of AIDS prevention. Also in other researches, such as Montazeri (15), Mazloomi (16), Mirnejad (17) similar results of good and sufficient amount of information for Iranian have achieved. However, Ramezan Khani 2003 (18), Facente in America (19), Mathews in South Africa (20) and Mbanya in Cameroon stated that most of the studied cases were weak and inappropriate.

Other results showed that 69% of participants had sufficient prevention knowledge, 27.8% average and 3.2% insufficient. Overall, this indicates that the studied cases in addition to good knowledge of AIDS transmission, they have appropriate information for the prevention of AIDS. In some cases, such as lack of food in the affected countries with 22.1% and drug therapy in infected areas with 22.4% were the lowest correct answers about prevention. These results are consistent with a study by Nojomi et al.

In this study, it was observed that there is no difference between the level of awareness and prevention of HIV in men and women. And both sexes of the participants had the same and good information. But these results were not consistent with Pakfetrat and Shahabi Nezhad (8), Nojomi (2), Chatter (22) and Rad (23). In general, their data showed that Women in the prevention of HIV transmission had more and comprehensive information than males. This may be due to the women availability to information via television or radio. However, it can be the main and effective factor to decline AIDS in women.

On the other hand, the knowledge about the modes of transmission and prevention of AIDS among married people by dramatic differences were more than single ones. This material indicates that the marriage besides reducing the risk of HIV transmission to the individual and society can increase the awareness of AIDS. Research results showed that the participants had gained their important information and awareness about AIDS through TV and radio stations. These results are similar to results of other researches in the world (25-5, 24). In fact, these results point to the important role of television in people's consciousness. Therefore, with proper training programs of the Health Ministry, a prominent role in control, prevention and rising awareness of the AIDS can be achieved (24).

Finally it can be noted that Iran due to its cultural, social and religious condition, considering marriage and good health in its community. Hence the efforts made by the government to maintain stability in families as well as appropriate training by Health Ministry, was an appropriate help to improve people's attitudes toward AIDS awareness. However, due to unfavorable geographical situation and the growing AIDS in Iran, It is recommended to continue composed, consultation and medical programs from the Health Ministry to control and prevent the disease in various environments such as hospitals, schools and universities.

ACKNOWLEDGMENTS

The authors gratefully thank Social Security Administration, personnel and supporters of Shohadaye Kargar Hospital & Ghaemiyeh Medical Center of Yazd and also those participants who helped with the collection of the data.

REFERENCES

1. Etemad K, Heidari A, Eftekhari Ardabili H, Kabir MJ, Sedaghat M. (2010). Knowledge and attitude levels in high risk groups about HIV/AIDS and relation with socioeconomic level indicators in Golestan province (2007). *J Gorgan Univ Med Sci* ; 12(2): 63-70. [Persian]
2. Nojomi M, Shojaee H, Amerian MA.(2002). The Knowledge of high school students about AIDS; Tehran 2002. *Archive of SID* 2002; (6)3: 41-46. [Persian]
3. World Health Organization. (2000).Report on the global HIV/AIDS epidemic.
4. Yaghoobi R. HIV Infection. 1 ed. Tehran: Afshari Publishing Center 1993.11-20 [Persian]
5. Behjati M, Ayatollahi J. (2006).Knowledge of high schools students in Yazd city about AIDS. *Iran J Pediatr* ; 4(15):321-325.
6. Singler J, Farmer P. *MSJAMA*. (2002). Treating HIV in resource-poor setting. *JAMA* ; 288(13): 1652-3.
7. Fauci AS, Brunwald E, Isselbacher K, Wilson JD, Martin JB and Kasper DL. *Harrison's principles of internal medicine*. 14 th ed.MC Graw-Hill 1998; 2: 1856
8. Pakfetrat A, Shahabi Nezhad H. (2004).Study on general knowledge of the patients referring to Mashhad dental school about AIDS. *Journal of Dentistry: Mashhad University of Medical Sciences*. 28(3):141-150.
9. Zareban I, Heidarnia AR, Rakhshani F, Jabari H, Abdollahi M. [A Efficacy of AIDS prevention training program on knowledge, attitude and practice of Chabahar sailors, Iran] *Tabib-E-Shargh, Journal of Zahedan University of Medical Sciences and Health Services*. 2006; 1(8): 29-36. [Persian]
10. Akbari M, Sedaghat A. *Activities report about HIV/AIDS in Republic Islamic of Iran*. 1th ed.Tehran: Ministry of health Publication seda; 2007. P. 6-25
11. Tavoosi A, Zafarani A, Enzevaei A, Tajik P, Ahmadinezhad Z. Knowledge and attitude towards HIV/AIDS among Iranian students, *BMC public Health* 2004.
12. HIV/AIDS Research Center. Shiraz University of Medical Sciences in Iran. (2013).. RACGP Online. Available at: <http://51.rc.research.ac.ir/Forms/Introduction.aspx>. Accessed April 15.
13. *International family planning Perspectives*, (2001).Gay Rule child Mortality. Vol 27, NO.1, P2
14. Ramezankhani A, Rostami S, Shokrollah A .(2004).The study of knowledge and attitudes of public school students in Tehran on AIDS. *Journal of Medical Science University and Sadoughi health services of Yazd*. 11 (1): 42-47.
15. Montazeri A. (2005).AIDS knowledge and attitudes in Iran: results from a population-based survey in Tehran. *Patient Educ Couns*; 57: 199-203.
16. Mazloomi Mahmoodabad S, Abbasi Shavazi M. (2006). Knowledge and attitude survey of high school students of Yazd province of Iran about HIV/AIDS. *Zahedan J Res Med Sci*; 8(1): 53-63.
17. Mirnejad R, Kiani J, Jeddi F, Alaedini F. (2009). Knowledge, attitude and practice of Iran University of Medical Sciences students about AIDS. *Iran J Nurs* ; 21(56): 17-26.
18. Ramezan Khani A, Rostami S, Shokrollah A. (2004).Evaluation of Knowledge and attitude about AIDS in Tehran high school students. *The J of Yazd University of Medical Sciences*; 11(4): 42-47
19. Facente AC. (2001). Adolescents and HIV: knowledge, behaviors, influences, and risk perceptions. *J Sch Nurs* 17(4): 198-203.
20. Mathews C, Kuhn L, Metcalf CA, et al. (1990). Knowledge, attitudes and beliefs about AIDS in township school students in Cape Town. *S Afr Med J*. 78 (9): 511-6.
21. Mbanya DN, Zebaze R, Kengne AP, Minkoulou EM, Awah P, Beure. (2001). Knowledge, attitudes and practices of nursing staff in a rural hospital of Cameroon: how much does the health care provider know about the human immunodeficiency virus/acquired immune deficiency syndrome? *Int Nurs Rev* 48(4): 241-9.
22. Chatterjee C, Baur B, Ram R, Dhar G, Sandhukhan S, Dan A. (2001). Study on awareness of AIDS among school students and teachers of higher secondary schools in north Calcutta. *Indian J Public Health* 45(1): 27-30
23. Rad M, Hashemipour M, Alizade R. (2009). Knowledge and attitudes of a group of patients referred to a dental center about HIV. *Dentistry journal of Shiraz University of Medical Science*. 10 (2): 144-151.
24. Golsha R, Roshandel GR , Rezaee Shirazi R, Roshandel D, Abdolaahi N, Jabari A, Besharat S, Semnani SH. (2007).The impact of education on knowledge and attitude of Red Crescent volunteers about HIV in Golestan. *Science Journal of Gilan University of Medical Science*. 9 (4): 56-60.

25. Tavoosi A, Zaferani A, Enzevaei A, Tajik P, Ahmadinezhad Z. (2004). Knowledge and attitude towards HIV/AIDS among Iranian students. *BMC Public Health*. 4:17.

CITATION OF THIS ARTICLE

Mohammad M S, Mohammad H S, Zeynab A, Nilofar A B. Knowledge of modes of transmission and prevention of AIDS among referred to hospitals for injection and dressing in Iran . *Bull. Env.Pharmacol. Life Sci*, Vol 4 [4] March 2015: 169-174