

## NEED ASSESSMENT FOR HIV/AIDS EDUCATION: THE LEVEL OF KNOWLEDGE ABOUT TRANSMISSION IN SOME RISK GROUPS IN TURKEY

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**Background:** Every year, the number of HIV/AIDS cases increases twice as much as the year before in Turkey. The authors anticipate that the actual numbers of HIV/AIDS cases in Turkey are higher than the number of cases diagnosed and reported.

**Subjects and Methods:** This review summarizes the results of some previous studies that were conducted among various risk groups, such as high school and university students, barbers, hair dressers, nurses, pharmacists and doctors, men and women engaged in the sex trade, and security workers in different regions of the country. The responses of participants to similar questions of the studies on the transmission of HIV/AIDS were evaluated in this review.

**Results:** The studies that have been conducted among different risk groups in different regions have shown that in spite of the low prevalence of HIV/AIDS in Turkey, many risk groups still do not have adequate or correct information on the prevalence and transmission of the disease.

**Conclusion:** Effective and extensive health education on HIV/AIDS, and the practice of healthy lifestyle would change the epidemiology of the disease in Turkey.

*Ann Saudi Med 2002;22(3-4):172-176.*

**Key words:** HIV/AIDS, risk groups.

Today, there are nearly 35 millions HIV/AIDS cases in the world. Already, 18.8 million people around the world have died of AIDS and 3.8 million of these were children. In 1999, 5.4 million people were infected with HIV, and it is estimated that there are 420,000 AIDS cases in Eastern Europe, parts of Asia, and 220,000 cases in the Middle East and North Africa.<sup>1</sup>

The population of Turkey which is a developing country is almost 70 million. Due to socioeconomic development, health indicators have continuously improved in the last two decades. Turkey is the only country that is geographically, socially and culturally European as well as Asian, therefore, the statistics of the country may be included in the European region or the Middle Eastern region reports of international organizations. Turkey is a secular state, where culturally Asian values predominate. The prevalence of HIV/AIDS in the country is generally considered to be low as compared to European and other South Asian countries.

The first AIDS case diagnosed in Turkey was that of a European worker living in Turkey. Since that first case in

1985, there have been 1067 cases reported to the Ministry Health (MOH). There were only two HIV/AIDS cases in 1985, but it reached a total of 138 between 1986-1990, 353 cases between 1991-1995, and 574 cases between 1996-2000.<sup>2</sup> On a yearly basis, the numbers of HIV/AIDS cases have been increasing, and it is projected that the number will be around 7000 in 2010 if current rates persist. The author believes that the actual numbers of the HIV/AIDS cases in Turkey are higher than have been diagnosed and reported.<sup>3</sup> The aim of this review is to summarize the results of the some studies that have been conducted among various risk groups.

### Materials and Methods

The health education activities related to HIV/AIDS in Turkey are carried out under a program of prevention and control of communicable diseases by the MOH. The awareness of the community against HIV/AIDS has gradually been increasing over the years. The risk groups studied included high school and university students, barbers, hair dressers, nurses, pharmacists and doctors, men and women engaged in the sex trade, and security workers in different regions of the country. The responses of participants in the studied groups to questions on the transmission of HIV/AIDS were evaluated. Each of the previous studies developed its own questionnaire for identifying the specific characteristics of the target groups,

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Accepted for publication 9 September 2001. Received 27 March 2001.

TABLE 1. Percent distribution of knowledge of various health personnel groups about means of transmission of HIV infection.

Ref. No	Group interviewed	Province/Year	Correct responses					Incorrect responses				
			Sexual	Blood	Maternal	Breast milk	Toilets	Hand shaking	Kissing	Sharing things	Mosquito bites	
4	Physicians (n=72)	Ankara (1995)	97	100	79	39	21	3	39	9	39	
	Nurses (n=67)	Ankara (1995)	98	93	88	-	39	11	40	8	64	
5	Physicians (n=33)	Ankara (1995)	100	100	86	51	21	2	32	3	-	
	Nurses (n=113)	Ankara (1995)	96	97	79	45	27	12	58	9	-	
6	Physicians (n=63)	Denizli (1997)	64	-	-	34	53	-	27	-	-	
	Nurses (n=71)	Denizli (1997)	71	-	-	25	68	-	13	-	-	
7	Pharmacist** (n1=50; n2=50)	Istanbul (1998)	-	50	50	50	-	-	-	-	-	
			-	67	52	59	-	-	-	-	-	

\* Each participant gave more than one response, all percentages are calculated from total (n) and independent of each other so they can not be combined or added; \*\*First line are the answers of pharmacists working at hospital, the second line are the answers of private pharmacists.

TABLE 2. Percent distribution of knowledge of university and high school students about means of transmission of HIV infection.

Ref. No	Group interviewed	Province/Year	Correct responses					Incorrect responses				
			Sexual	Blood	Maternal	Breast milk	Toilets	Hand shaking	Kissing	Sharing things	Mosquito bites	
8	University student (n=1000)	Istanbul (1993)	91	98	78	-	-	13	8	8	43	
9	Medical school (n=307)	Ankara (1993)	100	100	93	-	15	10	-	-	12	
10	Medical school (n=181)	Ankara (1993)	96	96	84	29	-	1	-	2	-	
11	Medical school (n=215)	Trabzon (1994)	90	95	80	-	-	-	-	-	-	
12	Different departments (n=410)	Trabzon (1994)	96	96	74	-	-	8	-	10	23	
13	School of Health Services, Hacettepe Univ.(n=138)	Ankara (1998)	97	97	71	49	9	-	-	-	27	
14	High school (n=429)	Adana (1994)	97	78	-	-	-	-	-	-	-	
15	High school (n=652)	Adana (1994)	97	90	-	50	-	67	-	-	40	
16	High school (n=383)	Adana	96	68	71	-	-	23	-	23	-	
17	High schools(2) (n=216)	Ankara	97/97	85/94	-	88/76	80/37	16/9	-	59/43	75/71	
18	High school (n=219)	Ankara	98	96	89	-	11	3	9	-	59	

and the results of studies on the knowledge of transmission of HIV/AIDS were evaluated.

## Results

In almost all the previous studies, the participants were asked about the mode of transmission of the infection. It was found participants lacked adequate knowledge on the mode of transmission of HIV/AIDS. Some answers to what caused HIV/AIDS included people using the same toilet, effect of mosquito bites, and kissing. Nurses and general practitioners reported more correctly on the modes of

transmission of HIV/AIDS (sexual and blood contact), but they had inadequate knowledge on maternal and breastfed transmission of HIV/AIDS. Interestingly, some also regarded the use of same toilets and the effects of mosquito bites as possible modes of transmission of HIV/AIDS (Table 1).

The level of knowledge of the university students (mostly in health related fields) was high on the means of transmission of HIV/AIDS, but some also had incorrect knowledge about the transmission of the disease. High school students generally had a lower level of knowledge on the transmission of HIV/AIDS, as compared to

TABLE 3. Percent distribution of knowledge of different risk groups about means of transmission of HIV infection.

Ref. No	Group interviewed	Place/Year	Correct responses					Incorrect responses			
			Sexual	Blood	Maternal	Breast milk	Toilets	Hand shaking	Kissing	Sharing things	Mosquito bites
19	Commercial sex workers (n=72)	Izmir (1994)	94	–	89	–	46	63	70	53	–
20	Commercial sex workers (n=98)	Diyarbakir (1994)	31	54	–	–	32	–	28	56	–
21	Commercial sex workers (n=206)	Ankara (1996)	97	97	95	–	41	11	33	27	–
22	Commercial sex workers (n=50)	Manisa (1997)	96	72	–	–	32	–	28	56	–
23	Security personnel (n=113)	Ankara (1994)	82	72	–	–	–	4	3	7	–
24	Barber (n=98)	Ankara (1993)	64	45	–	–	–	–	34	13	27
25	Barber/Women hairdresser (n=72)	Elazig (1994)	–	95	–	–	41	–	39	71	40

\*Each participant gave more than one response, all percentages are calculated from total (n) and independent of each other so they can not be combined or added.

university students (Table 2). The same was true for female commercial sex workers whose knowledge on the transmission of HIV/AIDS was comparatively low. Other risk groups such as barbers and women hair dressers seemed to be better informed on HIV/AIDS (Table 3).

## Discussion

Studies on the HIV/AIDS-related knowledge of the different risk populations in Turkey were reviewed in this study. The results of the studies indicate that almost every group in the society has some information regarding the means of transmission HIV/AIDS. The level of knowledge of community groups may not be evaluated only by presenting the results of the studies; the activities on preventive measures should also be evaluated. In Turkey, the Ministry of Health is responsible for the prevention and control strategies against HIV/AIDS. The policies of the MOH are summarized under four main headings: 1) to analyze the situation and dimensions of HIV/AIDS; 2) to develop proper prevention strategies; 3) to diagnose and provide health care to HIV/AIDS patients; and 4) to strengthen the intersectoral co-operation for dealing with HIV/AIDS.<sup>2,26</sup>

The activities of non-governmental organizations consist of providing information on HIV/AIDS to the community, counselling to people who need information on HIV/AIDS, helping the victims to be treated, and conducting studies on the knowledge, attitude and practice of risk groups.<sup>27</sup>

Studies indicate that there are some differences between the knowledge level of the same risk groups who live and in different regions of the country. For example, there was a considerable difference between the knowledge level of HIV/AIDS of female commercial sex workers who live in Ankara (the capital city of Turkey) and those in Diyarbakir

(the biggest city in South Eastern Anatolia) in studies that were conducted in the same year.<sup>19-22</sup> This difference could be explained by the socioeconomic and cultural differences between the regions of the country. As well, the educational activities on HIV/AIDS are conducted mostly by non-governmental organizations who are mostly based in the big cities. This also may result in the increasing gap between the regions in terms of knowledge of HIV/AIDS transmission.

Adolescents are known to be the highest risk group for HIV/AIDS in the world. Adolescents and young adults have the highest level of knowledge of HIV/AIDS in the community, but they also have inaccurate information on the mode of transmission. One focus group study was conducted by medical professionals to explain the reasons of the false knowledge on HIV/AIDS among university students. This focus group study showed that the students may generally have good information on HIV/AIDS, but they are uncertain on methods of transmission, especially whether swimming pools, use of same toilets and mosquitoes bites contribute to the transmission of HIV/AIDS.<sup>28</sup>

In Turkey, the curriculum of high schools and the include information on HIV/AIDS disease.<sup>29</sup> According to results of previous studies, young people do not seem to have adequate knowledge on the transmission of HIV/AIDS. They may need more education to raise their knowledge level on HIV/AIDS, which may require the evaluation of the school curriculum to highlight this issue more effectively.

Other high-risk group for HIV/AIDS include commercial sex workers, barbers and women hair dressers. These groups are very important in attempts to control the HIV/AIDS in the community, and need to be more targeted by the media. The media has had a major role in putting HIV/AIDS on the agenda of the community in Turkey, and

has supported the Ministry of Health and other non-governmental organizations in controlling the spread of HIV/AIDS.<sup>29</sup>

The maternal and breast milk-related transmission of HIV/AIDS are not sufficiently known as means of transmission of the disease in Turkey. The medical personnel are more aware of this type of transmission, and in recent years, there have been some newborn cases of breast milk-related transmission of HIV/AIDS, and information on maternal transmission is currently being emphasised in health education programs.

The type of the false information on HIV/AIDS is another important problem according to the findings of the studies. The common incorrect information on the transmission of HIV/AIDS is that the disease may be transmitted from the use of same toilets, swimming pools, mosquitoes, and through kissing. Students in some studies explained that the type of kissing and the health status of the mouth could be the reason for the infection.

Most previous studies showed a low level of knowledge of the people on HIV/AIDS, therefore, non-governmental organizations and educational institutes have now revised their programs. The goal in recent years has mostly been to increase the level of knowledge of HIV/AIDS in high-risk groups and to promote healthy lifestyle.<sup>30</sup> The aim of these programs is to improve educational methods for risk groups, especially through youth groups.<sup>27,31</sup> Efforts at finding reasons for the prevalence of false information on HIV/AIDS among the general population has not been adequate, and researchers need to use more qualitative studies so that risks groups can be targeted more effectively.

Studies that have been conducted among the different risk groups in different regions of Turkey have shown that a lot of effort has been made to inform the general population on the prevalence and transmission of HIV/AIDS. The prevalence of hepatitis B in Turkey is higher than the prevalence of AIDS, but people seem to know more about HIV/AIDS than hepatitis B. The extensive use of the media has helped people to learn more about the disease. Adoption of a healthy lifestyle and the proper dissemination of correct information through health education would help change the epidemiology of the disease in Turkey.

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