

Awareness of HIV/AIDS among Female Students Attending College of Applied Medical Sciences at Taif University

Rana G. Zaini* and Farah Anjum

Department of Medical Laboratories, College of Applied Medical Sciences, Taif University, Taif, Saudi Arabia

Abstract

Background: Human immunodeficiency virus (HIV) is the causative agent of acquired immune deficiency syndrome (AIDS) that has no cure at present. Recently, medical education is the best tool to prevent the infection. The level of knowledge about HIV/AIDS and the attitudes toward patients are crucial factors in eradicating the disease.

Methods: A cross-sectional study has been conducted for a period of two months and 128 undergraduate female students from the laboratory science, physical therapy, radiology and general nursing department in the College of Applied Medical Sciences at Taif University participated in the study. The questionnaire that entitles 'HIV/AIDS Campus Survey' consisted of three parts aimed to assess student's scientific knowledge, transmission awareness and attitude with 29 different statements.

Results: the survey results showed that more than half of the participants did not know the relation between AIDS and HIV and low awareness level toward the modes of HIV transmission was observed. Negative attitude towards HIV/AIDS persons was seen in the majority of participants.

Conclusion: this study is the first of its kind to be conducted at Taif University, and brought into limelight some important issues in relation to AIDS. Study concluded that these students need to be more aware about HIV transmission modes and protection methods, which can be achieved by enhancing their knowledge about HIV.

Introduction

The Acquired Immune Deficiency Syndrome (AIDS) that results subsequent to infection by Human Immuno-deficiency Virus (HIV) is considered to be one of the most serious challenge worldwide [1]. At present, AIDS has no cure and its treatment takes a heavy toll both financially and emotionally. HIV was discovered in the early 1980's and since then it has been spreading at an alarming rate [2]. The first case of AIDS was reported in Nigeria, where it has now attained an epidemic status with the highest proportion of people living with HIV [3]. The second highest number of HIV cases has been recorded in Andhra Pradesh in India [4].

In 2007, the estimated number of individual living with HIV all over the world was 33.2 million and the deaths resulting from this disorder was 2.1 million. According to United Nations, the Middle East and North Africa showed an increase in the number of persons living with HIV/AIDS from 87,000 in 2003 to 152,000 in 2005 [5]. However, the lowest prevalence was reported in the Middle East and this has been linked to Islam and its influence on the behaviors of the people residing in these societies [6]. In some Arabic countries such as Oman, the prevalence of HIV/AIDS is even lower, and this is probably due to religious and cultural factors [1]. Similarly, within a number of other societies the conservative culture strictly forbids sexual relationships outside marriage, which is responsible for low rates of HIV infection to a large extent [7].

Generally, the incidence and transmission of HIV is found to be variable. Also many factors influence its occurrence including age, gender and culture [6]. In Saudi Arabia, men were more affected than women with a ratio about 3:1, this might be explained by the large number of males traveling to other countries with high prevalence of HIV [8]. More than 60% of HIV cases reported in Saudi Arabia have been registered in Jeddah, Riyadh and Dammam. This could be attributed to high populations of these areas, in addition to the presence of illegal sex workers [8]. The majority (46%) of HIV/AIDS cases reported in Saudi Arabia have been found to be associated with sexual activity, 17% has been the result of blood transmission, while

the mother to child transmission accounts for 5% and 29% of the affected population denied to mention how they got it. The remaining HIV cases resulted from intravenous drug abuse (2%) and organ transplant (1%) [8].

Community's awareness level and knowledge about HIV/AIDS and their attitudes toward infected person play a very crucial role in controlling the disease. Currently, the major steps to prevent HIV infection are information, communication and education on HIV/AIDS that aim to target young people [7,9]. Media also plays a major role in elevating the level of awareness and knowledge of the community and infected patients. In contrast, neglecting HIV/AIDS and how the virus is transmitted can generate fear and prejudice towards those who are infected [9].

In 2011, a study done among secondary school students (aged 11-19 years) in India over a period of three months showed that all the students had heard about HIV/AIDS [10]. The study also showed that more than 50% of respondents had heard about HIV/AIDS from television and 46.9% from radio. Also the awareness regarding modes of transmission including; unprotected sexual intercourse, infected blood transfusion, sharing of needles and syringes and vertical transmission of HIV from infected mother to baby was found to be significantly higher ($P < 0.05$) among boys as compared to girls [10]. Similarly, 150 adolescent students from private school were the target population for the cross-sectional study performed at Kathmandu, Nepal for assessing their HIV/AIDS knowledge [11]. The study showed that the majority of the adolescents

Corresponding Author: Rania G. Zaini, Department of Medical Laboratories, College of Applied Medical Sciences, Taif University, Taif, Saudi Arabia E-mail: ranazaini2@tu.edu.sa

Citation: Zaini RG, Anjum F (2015) Awareness of HIV/AIDS among Female Students Attending College of Applied Medical Sciences at Taif University. Int J Lab Med Res 1: 104. doi: <http://dx.doi.org/10.15344/2455-4006/2015/104>

Copyright: © 2015 Zaini et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

had an average knowledge of HIV/AIDS, yet they did not know much about mode of transmission and prevention of this disease[11]. Another study was performed at a midwestern university in the United States to assess students' knowledge, sources of information and attitude toward people living with HIV/AIDS[12]. The study reported that the majority of students (77.3%) were familiar with HIV/AIDS including its mode of transmission. However, 14.2% of students thought that mosquitoes could transmit HIV/AIDS[12]. In Yemen, several serious misunderstandings about HIV/AIDS were observed among university students; they believed that mothers couldn't transmit HIV through breastfeeding. Also, 33.9% provided the wrong answer when asked whether the HIV virus infects only homosexuals [13]. This concurs with Al-Mazrou et al., (2005) study among students of health institutes and colleges in different regions of Saudi Arabia who were reported to have incorrect knowledge of HIV transmission. They believed that HIV could be transmitted by food and 20.2% agreed that insect could transmit the infection [8].

In addition, negative attitudes toward people living with HIV/AIDS was reported among Yemeni university male students while, female students showed more positive attitudes [13]. Within the same study, it was shown that more than half the students agreed that "people with AIDS should be ashamed of themselves" and they would be ashamed if one of their relatives got the infection[13]. Similarly, negative attitude was observed toward home-care for HIV/AIDS individuals and HIV/AIDS-infected individuals rights at work among Saudi paramedical students [8]. In Riyadh City, a study conducted on persons attending the Primary Health Care Centers indicated that more than half of the respondents would end their friendship with HIV/AIDS-infected persons and more than a quarter agreed that people with HIV/AIDS should be kept out from public places such as schools and workplaces[14].

Aim of the Study

Community's awareness of HIV/AIDS and their positive attitudes toward infected patients are crucial for controlling the disease. However, health practitioner knowledge and attitude are much important because of their role as health advocate and their direct contact with infected person.

The aim of this study is to assess the level of scientific knowledge, awareness of ways of transmission and attitudes toward HIV/AIDS patients among undergraduate student in four departments (laboratory science, physical therapy, radiology and general nursing) in Applied Medical College at Al-Taif University.

Rationale of the Study

Since the measurement of how many people know about different aspects of HIV/AIDS is crucial for designing proper prevention tools, especially for those who may be in contact with infected individuals and patients with AIDS.

Methods

This is a cross-sectional study. Study population is female undergraduate students of Applied Medical College at Al-Taif University and attending the following programs, medical laboratory, physical therapy, radiology and general nursing. A paper-based questionnaire of 29 statements was developed based on previous studies research [15,16] to investigate students' scientific knowledge, awareness of mode of transmission and their attitude toward infected person. The questionnaire was reviewed by two consultants and

piloted on 5 students. Their recommendations and suggestions were taken in consideration. The study was conducted between October to November 2014.

Data Analysis; the responses to the first part of the questionnaire, which was about scientific knowledge was in the form of multiple choices, while the part of HIV transmission awareness was assessed by rating scale as yes, not sure or no. The last part was used to assess the student's attitude toward HIV/AIDS individuals and the respondents' answer with self-scale rating as agree, not sure or disagree. The data was collected and analyzed statistically using SPSS version 16.

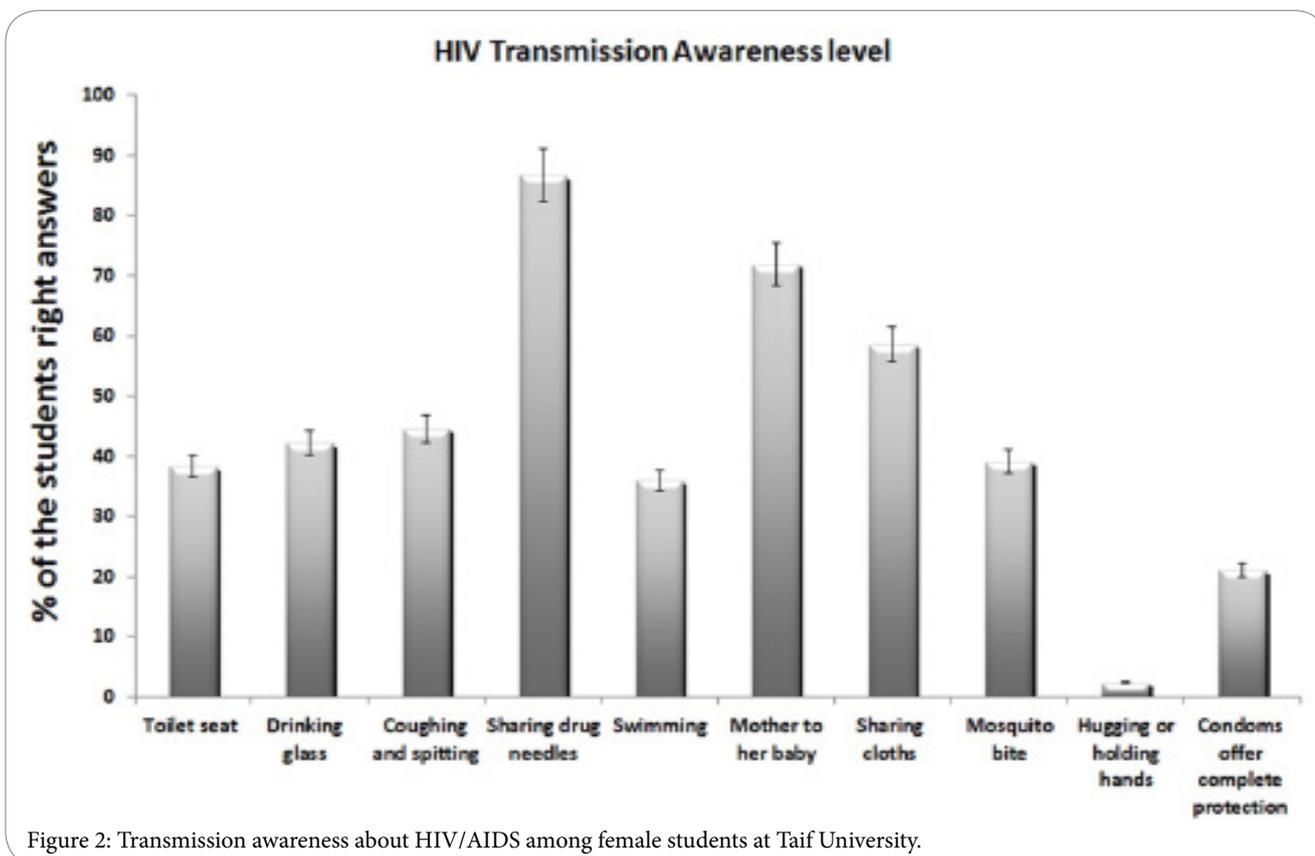
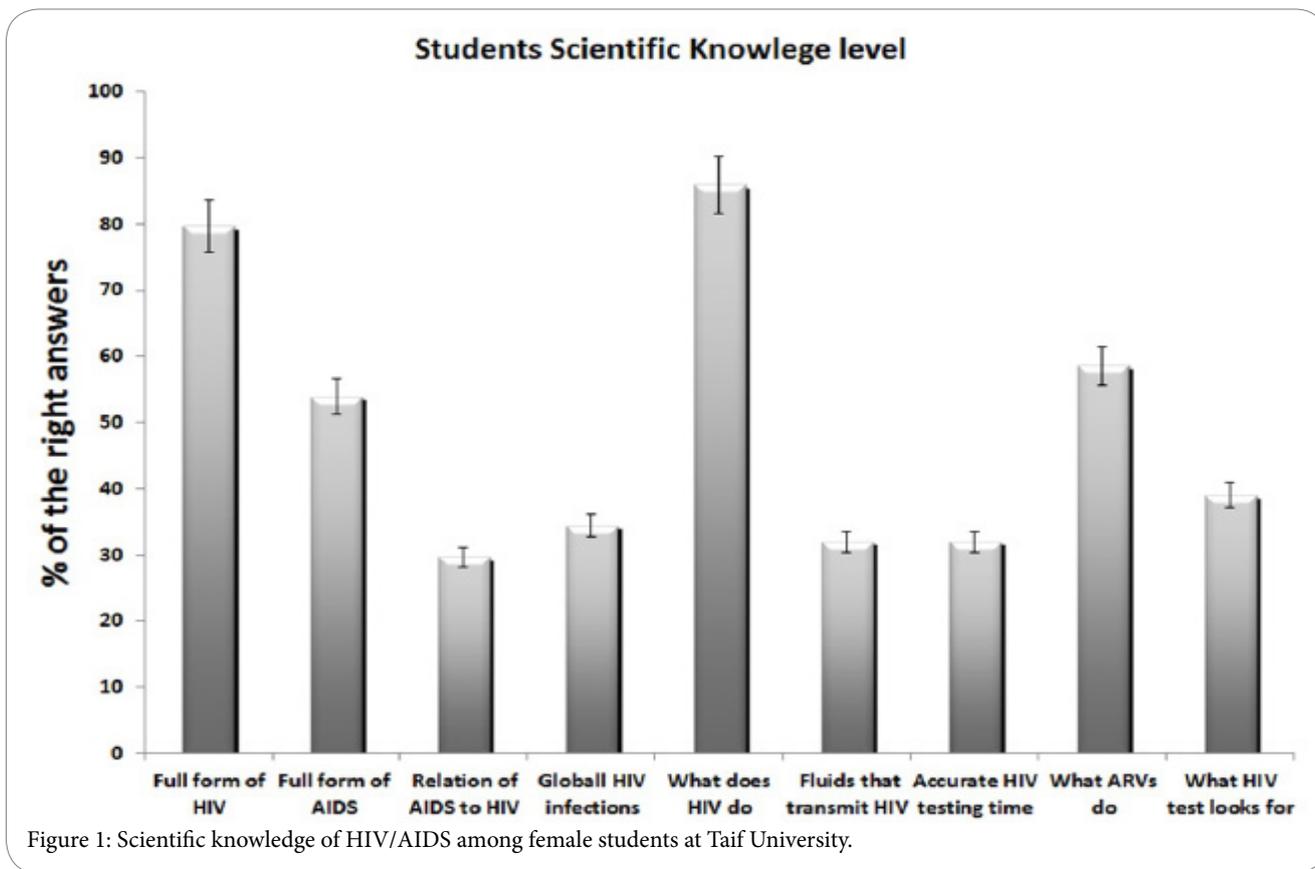
Results

A total of 128 undergraduate female students from the College of Applied Medical Sciences completed the survey in the departments of medical laboratory, physiotherapy, radiology and general nursing. The range of respondents' ages was between 19- 24 years. All the participants were Saudi nationals.

The survey investigated students' demonstration of the basic knowledge about HIV/AIDS/ with nine statements. Students showed limited understanding of the basic scientific knowledge with mean 4/9: some statements (facts) were well known by students, such as how HIV targets and attacks the immune system 85% (110/128), what does AIDS stand for 50% (64/128) (Figure 1). However, respondents' knowledge about the transmission of the disease was limited: only 32% (41/128) of respondents were aware that blood, breast milk and vaginal fluids but not the saliva could transmit the infection. The same proportion of students know that the most accurate time for testing HIV is about 3 – 6 months after contracting the virus (Figure 1).

The study also investigated respondents' knowledge of the HIV transmission with 10 statements. The results reported low understanding of the modes of HIV transmission among students. Many students were aware of the link between sharing drug needles and HIV (87%) (111/128), and between breast feeding milk of infected mother and HIV (72%) (92/128). On the other hand, only 58.5% (75/128) were aware of the fact that HIV could not be transmitted through sharing cloths with AIDS patients (Figure 2). Surprisingly, respondents had wrong beliefs regarding HIV transmission modes through hugging or holding hands (98%) (125/ 128), sharing of a swimming pool (64%) (82/128), sharing toilet seats (62%) (79/128), mosquito bite (61%) (78/128), sharing the same glass or water fountain (58%) (74/128/) and coughing and spitting (55%) (71/128) (Figure 2).

The study measured students' perception and attitude toward HIV/AIDS and infected patients with 10 statements. Generally, negative attitude was noticed among the majority of respondents: 63 % reported that they would get tested if they thought they might have HIV. Unexpectedly, only 44% (56/128) of the students would not mind having a student or colleague with HIV in their classroom or working place while the rest had a negative attitude (Figure 3). Although, most of the participants (69%) (88/128) reported their willingness to play sports with HIV positive patients. On the other hand (54%) (41/128) believed that HIV positive patients should be isolated from the community and not allowed to work in places that handle food (Figure 3). 43% of the respondents were ready and comfortable caring for someone who had AIDS. This study also indicated that 28% of the participants would feel comfortable hugging a person with HIV (Figure 3). Moreover, the attitude of the participants from different departments within the college was not significantly different (≥ 0.5) when assessed with SPSS version 16.



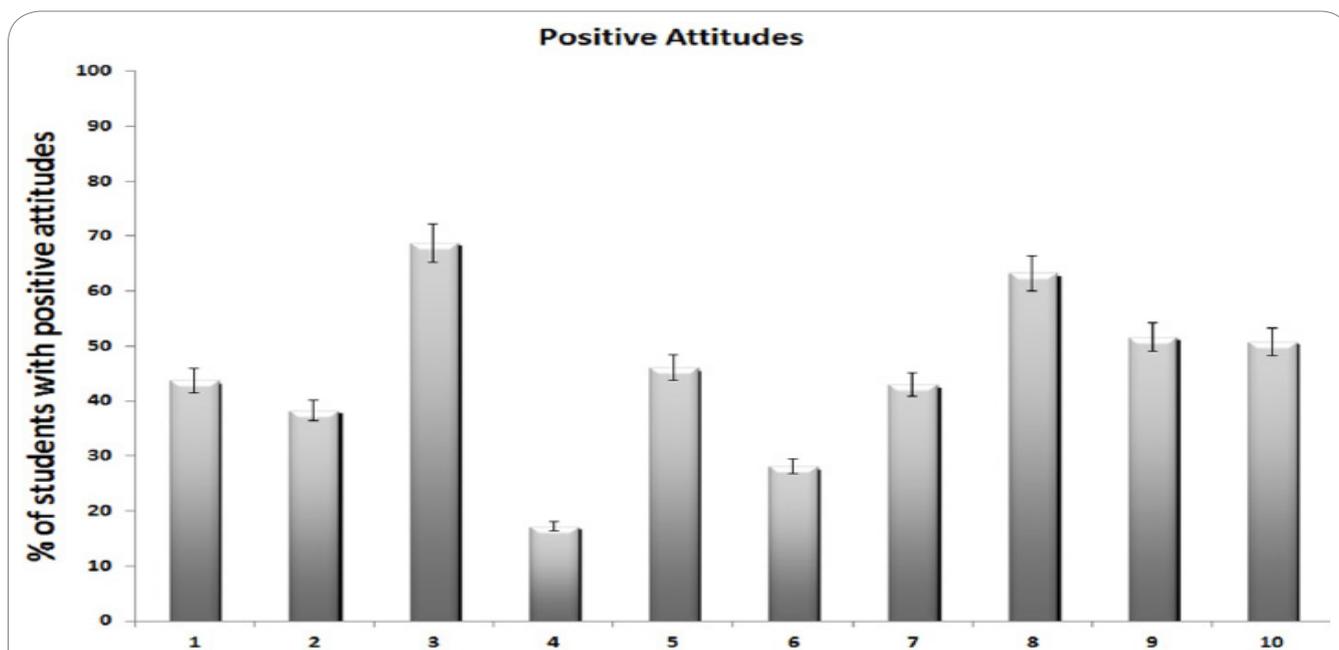


Figure 3: Positive attitude toward HIV/AIDS patients among female students at Taif University. Student would not mind having a student or colleague with HIV in my classroom or working place (1), student would avoid a person whose family member has AIDS (2), person infected with HIV should not play sports with other healthy individuals (3), persons infected with HIV should be separated from others (4), AIDS patients should not be allowed to work in places that handle food (5), student would feel uncomfortable hugging a person who has AIDS (6), student would be comfortable caring for someone who had AIDS (7), student would get tested if they thought they might have HIV (8), using shared instruments with a HIV infected individual is all right (9), people with AIDS should always stay in hospitals, not at home (10).

Discussion

Medical students and future health care providers are expected to play a crucial role in promoting health and treating illness, as well as being health advocates. HIV/AIDS is one of the most infectious diseases that require significant awareness, knowledge and skills. Yet the community and health care providers showed limited knowledge and negative attitude toward such a controversial issue. This study investigated female undergraduate students knowledge, awareness and attitude toward HIV/AIDS in the college of Applied Medical Sciences, Taif University, Saudi Arabia.

Generally, the study finding was disappointing: respondents did not demonstrate the essential scientific knowledge. 70% of the respondents did not know that HIV causes AIDS. This finding is consistent with the report of study performed among undergraduate students from the Colleges of Medicine in Oman [1]. However, most of the respondents know that HIV affects and targets the immune system. From the results of this study it is obvious that a true understanding of the disease is lacking. A concerted effort should be made to change the uninformed perception amongst students by implementing curriculums that will enhance their knowledge of HIV/AIDS starting from preclinical stage that will be sustained in the clinical level.

Our study has shown that 87% of the study population was aware of the fact HIV can be transmitted by sharing drug needles but most of them had incorrect perceptions about the modes of transmission through sharing toilet seats and mosquito bite (62% and 61% respectively). Quite similar to our study results has been shown in south of India that reported 64% of the study participants were unsure/unaware of the transmission through mosquito bite [9].

Stigma refers to negative attitude. Positive attitude towards people living with HIV/AIDS was found to be very low and there were many items in this section, which needed attention. For example, about half of the students reported that people with AIDS should always stay in hospitals, not at home. Furthermore, more than one third of the participants were not sure or feel uncomfortable hugging a person who has AIDS and more than 55% were unwilling to caring for AIDS patient. Negative attitude was also reported within a number of studies including; Yemeni university students [13], Saudi paramedical students [8], medical and dental students in USA [16] and in India [9].

Our study has brought into light some of the important issues and efforts are needed towards making medical students more aware about HIV/AIDS transmissions ways and protections methods, which can be mainly achieved through raising the levels of knowledge about HIV/AIDS. In addition, the increasing number of AIDS patients in Saudi Arabia will be seeking medical attention and it will be essential for the health care professions to develop programs, which counter unreasonable stigma and negative attitude that may be associated with the disease. Moreover, AIDS education within the faculty for health professionals should emphasize methods for the prevention of HIV infection among health workers and include teaching strategies designed to deal with irrational feeling regarding AIDS.

Competing Interests

The authors declare that they have no competing interests exists.

Author Contributions

Rana G. Zaini: Drafting manuscript, study design, survey's questions, encoding of data and data analysis.

Farah Anjum: Revised the manuscript critically for important intellectual content.

References

1. Al-Jabri AA1, Al-Abri JH (2003) Knowledge and attitudes of undergraduate medical and non-medical students in Sultan Qaboos University toward acquired immune deficiency syndrome. *Saudi Med J* 24: 273-277.
2. Barre F, Chermann C, Rey R, Nugeyre T, Chamaret S, Gruset J (1983) Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science* 220: 868-871.
3. Oboro HO, Azodo CC, Sede MA (2010) Perception of HIV/AIDS among preclinical dental students. *J Prev Med Hyg* 51: 164-169.
4. Report on the global HIV/AIDS epidemic [updated 2005 April 2; cited 2005 April 9]. Accessed 21st January 2015.
5. Report on the Global HIV/AIDS Epidemic, Annex 2 (Geneva: UNAIDS) (2006) The Middle East and North Africa region as defined here includes Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestinian Territory, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, the United Arab Emirates, and Yemen.
6. Obermeyer S (2006) Prevalence of HIV in the Middle East is low but there is no room for complacency. *BMJ* 333: 21.
7. Fahimi F (2007) Time to intervene: preventing the spread of HIV/AIDS in the Middle East and North Africa.
8. Al-Mazrou YY, Abouzeid MS, Al-Jeffri MH (2005) Knowledge and attitudes of paramedical students in Saudi Arabia toward HIV/AIDS. *Saudi Med J* 26: 1183-1189.
9. Sudha RT, Vijay DT, Lakshmi V (2005) Awareness, attitudes, and beliefs of the general public towards HIV/AIDS in Hyderabad, a capital city from South India. *Indian J Med Sci* 59: 307-316.
10. Srivastava M, Mahmood SE, Mishra P, Shrotriya VP, Shaifali I (2011) Adolescence Awareness: A Better Tool To Combat HIV/AIDS?. *National Journal of community med* 2:1.
11. Mahat G, Scoloveno MA (2006) HIV/AIDS knowledge, attitudes and beliefs among Nepalese adolescents. *J Adv Nurs* 53: 583-590.
12. Inungu J, Mumford V, Younis M, Langford S (2009) HIV knowledge, attitudes and practices among college students in the United States. *J Health Hum Serv Adm* 32: 259-277.
13. Badahdah AM, Sayem N (2010) HIV-related knowledge and AIDS stigma among college students in Yemen. *East Mediterr Health J* 16: 901-906.
14. Al-Ghanim SA (2005) Exploring public knowledge and attitudes towards HIV/AIDS in Saudi Arabia. A survey of primary health care users. *Saudi Med J* 26: 812-818.
15. Larsen KS, Serra M, Long E (1990) AIDS victims and heterosexual attitudes. *J Homosex* 19: 103-116.
16. Currey CJ, Johnson M, Ogden B (1990) Willingness of health-professions students to treat patients with AIDS. *Acad Med* 65: 472-474.