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Full Length Research Paper

Knowledge and attitude of male dental students toward HIV/AIDS in King Khalid University, Saudi Arabia

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In Saudi Arabia, according to recent epidemiological data from Ministry of Health 2009, number of HIV/AIDS cases are 15213. One of the most serious threats that dental students face during their clinical training, is the possibility of exposure to blood-borne pathogens, with the attendant risk of infection with HIV. The objective of this study is to assess the level of knowledge and attitude toward. This was a cross sectional analytic study among all male students of the Dental College of King Khalid University, who agreed to participate in the study. A validated self-administered anonymous questionnaire was used for data collection. The questionnaire includes four major categories: demographic variables, eighteen closed questions about knowledge of HIV infection, fifteen questions about oral manifestations of Human immunodeficiency virus infection / acquired immunodeficiency syndrome (HIV/AIDS) and seventeen questions addressed attitudes regarding treating HIV-positive patients, legal aspects, the right of HIV-positive health personnel to practice, and willingness to treat. Out of 400 male dental students invited to participate in the study, 363 returned filled questionnaire giving a response rate of 90.8%. Their age ranged between 20 and 29 years with a mean of 23.6 ± 1.6 years. The total mean knowledge score was 62.7% (good). Insufficient total knowledge score was reported among almost one-third of the dental students (34.7%). The overall mean attitude score was 66.4 ± 6.8%. The attitude in 9.1% was positive, 90.1% negative, and 0.8% passive. Pearson correlation coefficient showed students with higher knowledge scores had significantly more positive attitudes towards HIV/AIDS patients (r=0.223, p<0.001). The results of the present study revealed that king Khalid university (KKU) dental students have deficiencies with respect to their knowledge and amount of information received on HIV and AIDS related topics. The results indicate that dental students in KKU are less well prepared for their future task of treating patients with HIV infection and AIDS and highlight a need for improving the dental school curriculum regarding HIV and AIDS.

Key words: AIDS, HIV, knowledge, dental.

INTRODUCTION

The human immunodeficiency virus (HIV) is a retrovirus that infects the lymphocyte and other cells that bear the CD4 surface protein, leading to lymphopenia CD4 T –cell depletion, impaired cell – mediated immunity, and polyclonal B-cell activation (Subhada and Kellie, 2001). As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections. The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). It can take 10 to 15 years for an HIV-infected person to develop AIDS (World Health Organization, 2009).

In 2008, a total of 33.4 million people live with HIV /AIDS in the world, of them 31.3 million were adult population. People newly infected with HIV in 2008 is a Total of 2.7 million, 2.3 million were adults. AIDS-related deaths in 2008 is 2.0 million, of them 1.7 million were adults. Sub-Saharan Africa remains the most heavily affected region, accounting for 71% of all new HIV infections in 2008 (UNAIDS and WHO, 2009). In Saudi Arabia, according to recent epidemiological data from Ministry of Health 2009, number of cases are 15213, Saudis constitute about 25% of affected persons (Ministry of Health in Saudi Arabia, Registry and Statistics, 2009).

It spreads primarily through sexual contact (85.34%) and occurs by the transfer of blood, semen, vaginal fluid, pre-ejaculate, or breast milk. Within these bodily fluids, HIV is present as both free virus particles and virus within infected immune cells. The four major routes of transmission are unprotected sexual intercourse, contaminated needles mostly concerned to health care workers, breast milk, and transmission from an infected mother to her baby at birth (vertical transmission) (Gerbert, 1987).

This study aimed at assessing the level of knowledge and attitude of male dental students in King Khalid University, Saudi Arabia toward HIV/AIDS.

MATERIALS AND METHODS

This is a cross sectional study conducted in the College of Dentistry, King Khalid University – Abha – Saudi Arabia throughout the academic year 2011 to 2012. All male dental students of King Khalid University (KKU) were invited to participate in the study (400 students). We excluded all students in preparatory year and intern dentists.

A validated self-administered anonymous questionnaire used for the same purpose in Iranian dental students (Gilbertt and Nuttall, 1994) with some modification, was adopted to interview the participated students. The questionnaire includes four major categories; demographic variables including: age, marital status and academic year, paternal educational level. Eighteen closed questions about knowledge of HIV infection, transmission patterns, and opinions about adequacy of their own knowledge. The knowledge questions were answered using the options "Correct" and "Incorrect." All answers to either true (eleven questions) or false_(seven questions). A total score was obtained by adding the points given for each answer. For each correct and incorrect answer, one and zero points respectively were assigned. Hence, a student's total score could range from 0% (no answers correct) to 100% (all answers correct: 18 x 1 = 18). A higher score indicated a greater level of knowledge. Male dental students` knowledge was categorized according to mean percentage of correct answers into four categories; insufficient (mean score ≤ 60%), good (mean score 61 to 75%), very good (mean score 76 to 85%) and excellent (mean score >85%). Fifteen questions about oral manifestations of HIV/AIDS were included, with the options "Yes" and "No." Seventeen questions addressed attitudes regarding treating HIV-positive patients, legal aspects, the right of HIV-positive health personnel to practice, and willingness to treat. The answer to each question about attitudes was rated on a five-point Lickert scale (strongly agree, agree, neutral, disagree, and strongly disagree). The professional attitudes scores were computed from five to one and negative attitude, conversely. Scores of more than 75%, between 50 and 75%, and less than 50% were considered positive, negative, and passive attitudes, respectively. The positive attitudes were considered as professional attitudes. A higher score reflects intolerance towards infected patients, and its maximal possible score will be 85 (17x5). Validity of the study questionnaire has been confirmed by several researchers (Maimaiti, 2010; Hu et al., 2004; Oliveira et al., 2002; Pagliari et al., 2004; McCarthy et al., 1999; Sadeghi and Hakimi, 2009; Rosnow and Rosenthal, 1999; Kitaura et al., 1997; Cohen et al., 2005; Darling et al., 1992; Greenspan, 1990) and also by dental specialists and epidemiologists at the Research Council of Rafsanjan University of Medical Sciences (12), who conducted a pilot-test to check the applicability of the questions. They concluded that the questionnaire had a high degree of internal consistency as indicated by Cronbach's alpha correlation coefficient (0.67).

All the necessary official permissions were fully obtained before data collection. Collected data were kept strictly confidential and used only for research purposes.

Statistical analysis

Collected data were verified and coded prior to computerized data entry. The researcher utilized the statistical package for social sciences (SPSS version 19.0) for data entry and analysis. Percentages, mean, range and SD were used as descriptive statistics. Bivariate analyses of mean scores with regard to independent variables were done by ANOVA statistical test for comparison of more than two groups. Least significance difference test (LSD) test was used for post hoc comparisons of ANOVA. Student`s t-test was applied for comparison of the mean score of two groups. Pearson correlation coefficient was utilized to test for the correlation between total knowledge and attitude scores. A p-value of less than 0.05 was adopted for statistical significance.

RESULTS

Out of 400 male dental students invited to participate in the study, 363 returned filled questionnaire giving a response rate of 90.8%. The study included 363 students. As shown in Table 1, their age ranged between 20 and 29 years with a mean of 23.6 ± 1.6 years. The majority of them were singles (88.4%). Among the participants, 28.1, 21.5, and 50.4% of the students were in the second to fourth, fifth, and sixth years of the faculty, respectively. The fathers of more than one-third of them were university educated (37.2%) while illiteracy was reported among 19% of them. The mothers of 14.9% of them were university educated while no schooling among mothers was reported among almost one-quarter

Table 1. Baseline characteristics of the study group (n=363).

Characteristic	Number	%
Age in years		
20-22	99	27.3
23-24	159	43.8
≥25	105	28.9
Marital status		
Single	321	88.4
Married	42	11.6
Academic year		
2-4	102	28.1
5	78	21.5
6	183	50.4
Father`s educational level		
No schooling	69	19.0
Primary/intermediate school	96	26.4
Secondary school	63	17.4
University	135	37.2
Mother`s educational level		
No schooling	90	24.8
Primary/intermediate school	153	42.1
Secondary school	66	18.2
University	54	14.9

of the dental students (24.8%).

Table 2 shows that the total mean knowledge score was 62.7% (good). The highest rates of correct answers were reported in statements of “HIV/AIDS patients can contaminate dental workers” (87.6%), “HIV/AIDS patients can be presented with oral manifestations” (85.1%), “dental workers can act as an intermediary for transmission of HIV” (84.3%), “needle stick injury can transmit HIV” (83.5%) and “medical staff are more prone for cross-contamination” (83.5%). The lowest rates of correct answers were reported in the statements of “the negative ELISA test indicates that the persons are free of HIV” (34.7%), “all sterilization methods have cidal effects against HIV” (41.3%) and “CPR in patients with AIDS can transmit HIV infection” (46.3%).

As seen in Figure 1, only 28.1% of the dental students claimed that they have adequate knowledge regarding HIV/AIDS. Among those who stated that they have no adequate knowledge regarding HIV/AIDS (71.9%), 59.4% of them have mentioned that the most beneficial method to strengthen their knowledge about HIV/AIDS is workshop and group discussion while 40.6% have mentioned that lectures will improve their knowledge regarding HIV/AIDS.

Insufficient total knowledge score was reported among almost one-third of the dental students (34.7%). The total knowledge score was good in more than one third of the participants (36.4%). Very good and excellent knowledge were reported among 25.6 and 3.3%, respectively (Figure 2). Most of the participants attended training course or lecture about HIV/AIDS (71.1%).

As shown in Table 3, older dental students had more HIV/AIDS knowledge score than younger students (12.9 ± 1.7 versus 9.6 ± 4.1). This difference is statistically significant, $p<0.001$. Dental students of 6th year had more HIV/AIDS knowledge score than those in years 2-4 (13.0 ± 2.8 versus 10.3 ± 4.4, $p<0.001$). Students whose fathers had university grade had higher significant knowledge about HIV/AIDS compared to those whose fathers had no schooling (12.6 ± 2.5 versus 11.3 ± 3.7, $p=0.031$). Similarly, students whose mothers had university grade had higher knowledge about HIV/AIDS compared to those whose mothers had no schooling (12.3 ± 3.2 versus 12.0 ± 2.4). However, this difference was not statistically significant, $p=0.183$. There was no statistically significant difference between students, who claimed that they have adequate knowledge regarding HIV/AIDS and those who have reported no adequate knowledge. In addition, attending training courses about HIV/AIDS was not significantly associated with better HIV/AIDS knowledge among male dental students.

Regarding knowledge about oral manifestations of HIV/AIDS, 76.9% correctly identified gingivitis, 74.4% oral candidiasis, 70.2% severe periodontitis, 68.6% salivary gland infection and 62% Kaposi’s sarcoma. Only 31.4% correctly identified Condyloma acuminatum as one of the oral manifestations of HIV/AIDS and 48.8% identified correctly Hodgkin's lymphoma as not an oral manifestation of HIV/AIDS (Table 4). The overall mean percentage of correct answers regarding oral manifestations of HIV/AIDS was 57.6 ± 24.9.

The results showed the overall mean attitude score was 66.4 ± 6.8%. Figure 3 illustrated that 9.1% was positive, 90.1% negative, and 0.8% passive attitudes. The attitudes score ranged from 41 to 71 out of a total of 85.

As shown in Table 5, 77.7% of the male dental students strongly agreed or agreed with the statement “All dental patients should be considered potentially infectious”, 71.7% “Supporting HIV/AIDS patients improves community health”, 69.4% with the statement “I worry about being infected with HIV by my patients” and 68.5% with the statements “It is my right to know if my patients are infected by HIV”. Pearson correlation coefficient showed students with higher knowledge scores had significantly more positive attitudes towards HIV/AIDS patients ($r=0.223$, $p<0.001$).

DISCUSSION

The study included 363 male dental students with a response rate of 90.8%. This high response rate can probably be ascribed to the researcher himself in

Table 2. Knowledge of the male dental students about HIV/AIDS (n=363).

Statement	Correct answer	
	No.	%
HIV/AIDS patients can contaminate dental workers (true)	318	87.6
HIV/AIDS patients can be presented with oral manifestations (true)	309	85.1
Dental workers can act as an intermediary for transmission of HIV (true)	306	84.3
Needle stick injury can transmit HIV (true)	303	83.5
Hepatitis B is more communicable than HIV/AIDS (true)	288	79.3
Medical staff are more prone for cross-contamination (true)	303	83.5
The negative ELISA test indicates that the persons are free of HIV (false)	126	34.7
Western blot is a definite test for HIV/AIDS diagnosis (true)	207	57.0
ELISA is a screening test for HIV infection (true)	243	66.9
The specificity of the HIV tests is 100% (false)	174	47.9
Saliva can be a vehicle for the transmission of AIDS (false)	192	52.9
Infection control methods for hepatitis B provide adequate protection against the transmission of HIV (true)	258	71.1
There are special dental clinics for treatment of HIV/AIDS patients in KSA (false)	231	63.6
There is a lot of HIV in the saliva of HIV/AIDS patients (false)	195	53.7
CPR in patients with AIDS can transmit HIV infection (false)	168	46.3
All sterilization methods have cidal effects against HIV (true)	150	41.3
AIDS is one of the most important health problem in the world (true)	276	76.0
HIV can be transmitted through aerosols by hand pieces (false)	177	48.8
Total	363	62.7

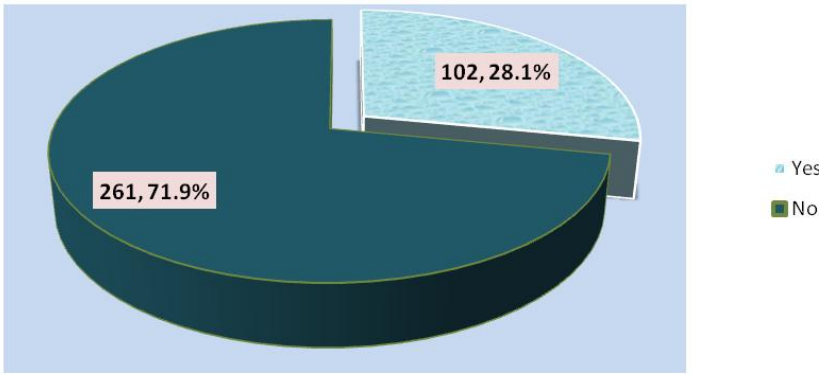

Figure 1. Adequacy of knowledge about hiv/aids among male dental students.

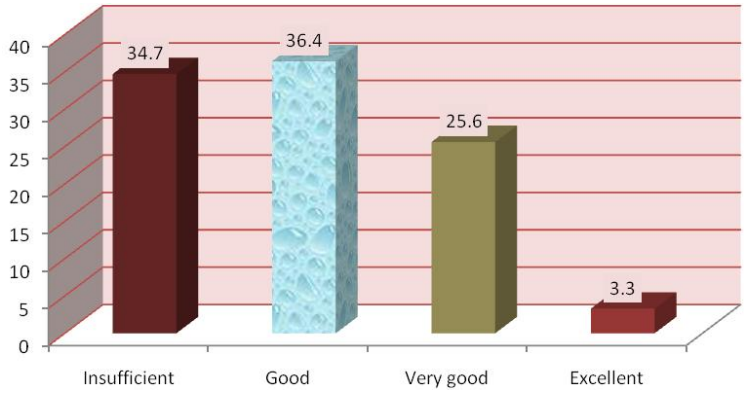

Figure 2. HIV/AIDS knowledge among male dental students, Abha.

Table 3. Factors associated with mean score reflecting knowledge of the male dental students about HIV/AIDS (range 0-18).

Variable	Mean	SD	p
Age in years			
20-22 (99)	9.6	4.1	
23-24 (159)	13	3.3	
≥25 (159)	12.9	1.7	<0.001*
Academic year			
2-4 (102)	10.3	4.4	
5 (78)	12.1	3	
6 (183)	13	2.8	<0.001*
Father`s education			
No schooling (69)	11.3	3.7	
Primary/intermediate (96)	12.4	2.9	
Secondary (63)	12.4	4.6	
University (135)	12.6	2.5	0.031*
Mother`s education			
No schooling (90)	12	2.4	
Primary/intermediate (153)	11.9	3.2	
Secondary (66)	11.5	5.2	
University (54)	12.3	3.2	0.183*
Self evaluation of HIV/AIDS knowledge			
Yes, I have knowledge (102)	12.3	3.1	
No, I do not have adequate knowledge (261)	11.9	3.7	0.341**
Attending HIV/AIDS training courses			
Yes (258)	11.9	3.3	
No (105)	12.4	4.1	0.217**

*ANOVA; ** Student`s t-test.

Table 4. Knowledge of the male dental students of oral manifestations of HIV/AIDS (n=363).

Statement	Correct answer	
	Number	%
Oral candidiasis (true)	270	74.4
Major aphthous (true)	222	61.3
Kaposi's sarcoma (true)	225	62.0
ANUG (acute necrotizing ulcerative gingivitis) (true)	207	57.0
Severe periodontitis (true)	255	70.2
Cytomegalovirus (true)	192	52.9
Gingivitis (true)	279	76.9
Xerostomia (true)	213	58.7
Hairy leukoplakia (true)	156	43.0
Salivary gland infection (true)	249	68.6
Herpes zoster (true)	180	49.6
Herpes simplex (true)	198	54.5
Lichen planus (true)	198	54.5
Condyloma acuminatum (true)	114	31.4
Hodgkin's lymphoma (false)	177	48.8

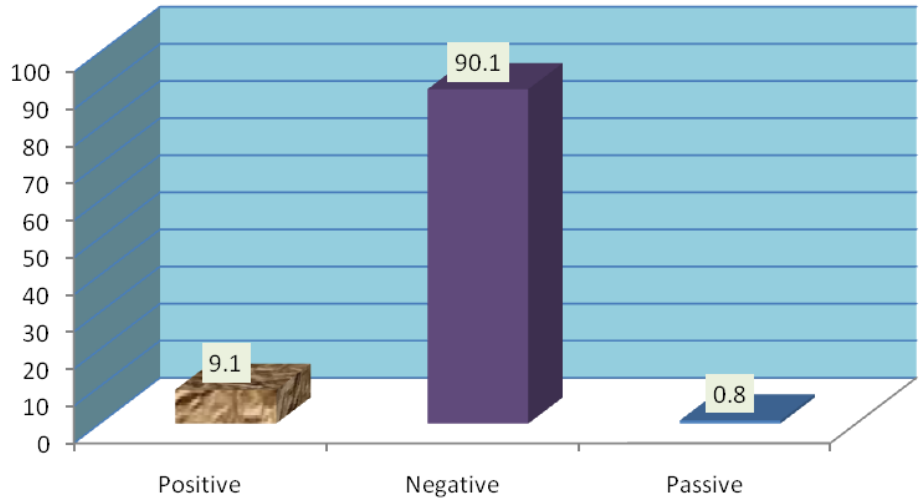

Figure 3. Attitude of male dental students towards HIV/AIDS.

Table 5. Responses of the male dental students to the questions about their attitude towards HIV/AIDS (n=363).

Statements	Strongly agree No. (%)	Agree No. (%)	Neutral No. (%)	Disagree No. (%)	Strongly disagree No. (%)
1) Treatment of HIV/AIDS patients means wasting national resources	84 (23.1)	96 (26.4)	78 (21.5)	57 (15.7)	48 (13.2)
2) All dental patients should be considered potentially infectious	171 (47.1)	111 (30.6)	60 (16.5)	12 (3.3)	9 (2.5)
3) If I know that my friend has HIV infection, I end the friendship	39 (10.7)	84 (23.1)	84 (23.1)	63 (17.4)	93 (25.6)
4) Supporting HIV/AIDS patients improves community health	135 (37.2)	123 (33.9)	66 (18.2)	30 (8.3)	9 (2.5)
5) Dentists with HIV/AIDS should not be allowed to treat patients	147 (40.5)	84 (23.1)	72 (19.8)	39 (10.7)	21 (5.8)
6) HIV/AIDS patients should be treated at a separate ward	132 (36.4)	105 (28.9)	78 (21.5)	45 (12.4)	3 (0.8)
7) A blood test should be taken for diagnosis of HIV infection in all dental patients	108 (29.8)	108 (29.8)	75 (20.7)	60 (16.5)	12 (3.3)
8) I am morally responsible to treat HIV/AIDS patients	93 (25.6)	138 (38.0)	81 (22.3)	39 (10.7)	12 (3.3)
9) HIV/AIDS patients can live with others in the same place	63 (17.4)	108 (29.8)	120 (33.1)	63 (17.4)	9 (2.5)
10) I am not obligated to treat HIV/AIDS patients	51 (14.0)	108 (29.8)	120 (33.1)	66 (18.2)	18 (5.0)
11) HIV/AIDS patients can lead a normal life	39 (10.7)	117 (32.2)	150 (41.3)	36 (9.9)	21 (5.8)
12) I can safely treat HIV/AIDS patients	33 (9.1)	99 (27.3)	123 (33.9)	84 (23.1)	24 (6.6)
13) I will treat HIV/AIDS patients	27 (7.4)	123 (33.9)	135 (367.2)	45 (12.4)	33 (9.1)
14) My knowledge about infection control is enough to treat HIV/AIDS patients	36 (9.9)	99 (27.3)	138 (38.0)	69 (19.0)	21 (5.8)
15) I worry about being infected with HIV by my patients	105 (28.9)	147 (40.5)	93 (25.6)	12 (3.3)	6 (1.7)
16) I will do CPR if HIV/AIDS patients need it	45 (12.4)	111 (30.6)	87 (24.0)	54 (14.9)	66 (18.2)
17) It is my right to know if my patients are infected by HIV	153 (42.1)	96 (26.4)	84 (23.1)	18 (5.0)	12 (3.3)

personal contact with the college dean as well as to the explanation of the purpose of the study, scientific importance and value of the study to students. According to Rosnow and Rosenthal (1999), these techniques (for example, personal contact, using reminders and explaining the scientific importance and value of the study, ensuring the participants confidentiality) are linked to increase participation in surveys.

As the number of people with HIV/AIDS increases, the need of these individuals for medical care including dental care will increase (Hu et al., 2004; Kitaura et al., 1997; Cohen et al., 2005), so dental practitioners will be required to enhance their knowledge of the disease and its oral manifestations (Darling et al., 1992). In our study, the mean of students' knowledge about HIV/AIDS patients was good, but this knowledge was not significantly associated with the willingness to treat HIV/AIDS patients. If dental students are not confident of their knowledge about HIV/AIDS patient management, they do not properly prepare themselves to treat these patients. A lack of confidence in their own ability to manage HIV/AIDS patients could have amplified their perceived risk of being infected with HIV as well (Greenspan, 1990). In the current study, almost two-thirds of male dental students were concerned about being infected with HIV by their patients. Approximately 40% declared that they will treat HIV/AIDS patients.

Although a majority of the KKU dental students were aware of the common transmission routes for HIV infection, their knowledge was less accurate with respect to other HIV- and AIDS related topics. In Sudan, comparable results have been documented (Al–Naimi and Al–Saygh, 2009). The consistency of the present findings suggest that KKU dental students might be less well prepared for the task of treating patients with HIV infection and AIDS and that the dental school curriculum regarding HIV and AIDS needs some improvements.

Most of the students were aware of the oral lesions associated with HIV. The knowledge was oral candidiasis (74.4%), major aphthous (61.3%) and Kaposi's sarcoma (62%), while the condition like Condyloma acuminatum (31.4%) and Hairy leukoplakia a (43%) were less known. These figures were comparable to findings of other studies (Hu et al., 2004; Erasmus et al., 2005). However, they are higher than those reported by others (Shan et al., 2011) and lower than reported in Iran by (Sadeghi and Hakimi, 2009).

Our study found that dental students' attitudes towards treating HIV/AIDS patients were negative. Attitude factors significantly associated with the unwillingness to treat these patients were the following: inability to treat infected patients safely, being not obligated to treat HIV/AIDS patients, and believing that HIV/AIDS patients cannot lead a normal life, and HIV/AIDS patients cannot live with others in the same place. Contrary to that attitude has been reported in an Iranian study (Sadeghi and Hakimi, 2009). However, in that study, the majority of participants were female dental students while in the present study all participants are males.

In this study, the general willingness to treat HIV-positive patients was less than reported in other studies. The study of Hu et al. (2004) reported 49% the study of Sadeghi and Hakimi (2009) reported 51% while in the present study, 41.3% of the participants reported that they will treat HIV/AIDS patients. In addition, our results regarding this factor were lower than the findings of Kuthy et al. (2005) (60%) and Seacat and Inglehart (2003) (81.1%).

It is encouraging that most of the students attended training courses or lectures about HIV/AIDS. However, this did not appear to improve their knowledge. The quality of these training courses and lectures is questionable.

Most students (77.7%) thought that each patient should be considered potentially infectious. This feeling may be warranted since some HIV/AIDS patients abstain from declaring their illness out of fear of being denied dental care (Fallahi et al., 2008). Based on these considerations, infection control precautions must be strictly followed with every patient.

Although the possibility of transmission of HIV/AIDS does exist within the dental setting (Hu et al., 2004), on the question whether HIV could be transmitted through aerosols emitted from hand pieces, only 48.8% of the students in our study responded negatively. Exactly the same has been reported among Iranian dental students (Sadeghi and Hakimi, 2009). This may be due to the fact that reports of HIV transmission through this route are very rare, though it cannot be completely excluded (Blignaut, 1994). A patient's oral fluids and blood can be aspirated into a hand piece or dental unit waterline, and unless water quality is controlled, a practitioner or new patient could be exposed to the microbes of previous patients. In addition, a practitioner's skin is often not completely protected, thereby increasing the possibly of spatter and aerosol contact (Palenik et al., 2000). In one study, more than half the students thought that such transmission was not possible, indicating that the transmission routes of the disease were not fully understood (Erasmus et al., 2005).

In our study, 43.8% of dental students agreed that "I am not obligated to treat HIV/AIDS patients"; 65.3% said that these patients should be treated at a separate ward; and 41.3% declared that they will treat these patients. Current guidelines are that dentists must not refuse to treat a patient solely on the grounds of HIV infection (Pagliari et al., 2004) and they cannot legally refer these patients to specialty clinics for routine dental care (Askarian et al., 2007). Some of the reasons for referring are as follows: lack of ethical responsibility, fear of staff members, concerns related to uncertainty regarding safety regulations, cost of infection control procedures, lack of knowledge regarding oral lesions associated with HIV, and loss of normal patients due to treating HIV-

positive patients (Hu et al., 2004; Pagliari et al., 2004; Bennett et al., 1995). Overestimation of the transmission risk of HIV seemed to be the most important reason for fear in providing dental care to HIV/AIDS patients (Maimaiti, 2010). Students' fear may overpower their intellectual and practical ability to cope with the treatment and management of such patients (Erasmus et al., 2005). Therefore, only one-third of students in our study reported that they can safely treat HIV/AIDS patients.

More than one-third of the students agreed that saliva can be a vehicle for the transmission of AIDS. Transmission through saliva in the clinic has not yet been reported, and this has been explained by the ability of the glandular saliva to inhibit the infectivity of HIV (McCarthy et al., 1999; Börsum and Gjermo, 2004).

There is treatment center that treat HIV/AIDS patients in KSA, and only 63.6% of the students in our study were aware of this fact.

In the present study, although the correlation between HIV/AIDS knowledge and attitude is week (r=0.22). However, this correlation was statistically significant most probably due to high sample size included in the present work (363 students).

Our study confirmed that there is a gradual acquisition of HIV/AIDS knowledge and change of attitude by academic level as HIV/AIDS knowledge is higher among students of higher grades in addition to the fact that HIV/AIDS knowledge is positively and significantly correlated with attitude towards patients in the present research. This could help in the development of training program for dental students regarding HIV and AIDS.

Among important limitations of the present study, it includes only male dentistry college students. Due to the conservative community regulations in Saudi Arabia, female students were being included. So, the generalizability of the results of this study cannot be applied to female dentistry students.

The results of the present study should be interpreted with caution since it is limited by the use of self-administered questionnaires and not by interviews and by the inclusion of students volunteering to participate and from one-setting in KSA. It might be argued, however, that anonymous self reports is more reliable than interview data in that the respondents are less prone to the pressures of social demand emanating from conversation face to face with a research assistant (Hirschman et al., 1984). Moreover, the questions employed were sufficiently simple and unambiguous to achieve a reasonable degree of validity on the different variables. In fact previous researchers have found such self- reports to be quite reliable.

Conclusively, the results of the present study revealed that KKU dental students have deficiencies with respect to their knowledge and amount of information received on HIV and AIDS related topics. The results indicate that dental students in KKU are less well prepared for their future task of treating patients with HIV infection and AIDS and highlight a need for improving the dental school curriculum regarding HIV and AIDS.

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