

ORIGINAL ARTICLE

Attitude and knowledge of dental students of National Capital Region regarding HIV and AIDS

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ABSTRACT

Background: India is estimated to have third highest number of Human Immunodeficiency Virus (HIV) infection in world with about 2.4 million people currently living with HIV/Acquired Immunodeficiency Syndrome (AIDS). There is a possibility of HIV transmission in the oral health care setting and thus adequate knowledge and proper attitude among dental students is vital to prevent the chances of transmission and for proper care of the patient.

Aims and Objectives: The present study aimed to investigate the knowledge of dental students about HIV infection and their attitude toward treating HIV/AIDS patients and behaviour practiced.

Materials and Methods: A cross-sectional survey was conducted among 600 dental students of different colleges present in National Capital Region (NCR). The students were from third and fourth year and they completed a predesigned questionnaire assessing the knowledge, attitude and willingness to treat HIV/AIDS patients. One-way analysis of variance (ANOVA) was applied to compare mean level of knowledge and attitude toward HIV/AIDS.

Result: The results showed that only 28% students have excellent knowledge regarding HIV/AIDS. Certain misconceptions were prevalent regarding mode of transmission. It also shows that around 43% of the dental students have an overall negative attitude.

Conclusion: The findings suggest that the students had adequate knowledge about HIV/AIDS and their attitude toward this group of people was significantly negative. There is need and scope to provide correct and detailed information on HIV/AIDS for dental students.

Key words: Acquired immunodeficiency syndrome, attitude, human immunodeficiency virus infection

INTRODUCTION

The acquired immunodeficiency syndrome (AIDS) epidemic is continuing to grow^[1] and global estimates indicated that over 40 million people are infected.^[2] The fact that the number of human immunodeficiency virus (HIV)-infected patients under dental care is expected to increase^[3] highlights the importance of providing healthcare, part of which is dental treatment, to all individuals indiscriminately.^[4] The reports indicated that about 90% of the HIV infections among

healthcare workers occurs in developing countries where occupational safety is a neglected issue.^[5,6]

AIDS is the serious epidemic problem in India. The AIDS epidemic is one of the most destructive health crisis of modern times, ravaging families and communities throughout the world. In India, a semiautonomous body called National AIDS Control Organization (NACO) was established under ministry of health and family welfare to control the HIV epidemic.^[7] According to joint United Nations (UN) Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO), approximately 34 million people are currently living with HIV and about 30 million people have died of AIDS-related causes since the beginning of epidemic.^[8] According to new estimates released by NACO supported by UNAIDS and WHO, an estimated 23.9 lakh people are infected with HIV in India by 2009-2010. According to NACO, adult HIV prevalence at national level is 0.31% in 2009. HIV/AIDS has devastating effect on adolescents.^[9] Till date very less work

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has been done to assess the knowledge and attitude among Indian dental students, hence a sincere attempt has been made on this front. The purpose of this study was to assess the dental student's knowledge of HIV/AIDS and attitude toward them and their willingness to treat patients living with HIV and AIDS (PLWHA).

MATERIALS AND METHODS

A cross-sectional questionnaire survey was conducted among 600 students studying in third and fourth years of dental colleges located in National Capital Region (NCR). The sample was selected, as they treat the patients in the clinics. The students were given a predesigned questionnaire [Table 1] during a regular theory class. All the students participated voluntarily in the study and were informed about the confidentiality of their response. All students were asked to report about their age, gender and year of study. The questionnaire included 25 questions out of which 15 questions represent knowledge of the subjects and 10 questions represent attitude of the subject towards HIV/AIDS. The questionnaires were distributed to the respondents and were asked to complete it individually. Each and every question was explained to them before they answered to prevent any ambiguity.

Statistics

Later the data were subjected to statistical analysis by using Statistical Package for Social Sciences (SPSS). One-way ANOVA (Analysis of Variance) was used to compare the mean level of knowledge and attitude toward HIV/AIDS between the genders, years of study and age groups. To calculate mean level of knowledge and attitude, '0' score was assigned for negative knowledge and attitude and '1' score was assigned for positive knowledge and attitude.

RESULTS

A total of 600 dental students returned a completed questionnaire giving an overall response of 100%. About 60% respondents fell into 21-23 years age group and majority of dental students were unmarried (89.5%). Male to female ratio was approximately 1:2 [Table 2]. According to the survey, only 28% subjects had excellent knowledge and 54% subjects had good knowledge regarding HIV and AIDS. In all, 7% responded poorly to the questionnaire [Table 3]. When the subjects were asked where they will refer the HIV/AIDS patients for the treatment, 86% responded for hospital but 21.5% subject said they will refer them to traditional healers and 16% to miracle center (P value: 0.00) [Table 4].

There were more misconceptions regarding the mode of transmission among the subjects, 78.5% said the mode of transmission is unprotected sex, whereas 34 and 25% said breast feeding and kissing, respectively [Table 5]. The most

Table 1: Questionnaire

1. AIDS is caused by which virus?
2. Does HIV-infected patient attend dental clinic?
Yes No
3. Do you think all HIV-positive patients look unhealthy?
Yes No
4. Do you think there is no cure for HIV/AIDS?
Yes No
5. Do you think there is any appropriate vaccine for HIV available?
Yes No
6. Does HAART improve the quality of life in HIV-positive people?
Yes No
7. Where will you refer the HIV-positive patients?
a. Hospital HIV counselling
b. Miracle centre
c. Traditional healer
d. No response
8. What are the modes of transmission of HIV/AIDS (tick multiple if required)?
a. Unprotected sex
b. Breast feeding
c. Blood transfusion
d. Unsterilized instruments
e. Sharing of sharp instruments
f. Kissing
9. What are the sources from which you get information regarding HIV/AIDS (tick multiple if required)?
a. Electronic media
b. Magazine/newspaper
c. Health worker
d. Seminars/workshops
e. Pamphlets/posters
f. Text book
g. Internet surfing
10. With whom have you discussed HIV-related issues most frequently?
a. Classmates/friends
b. Parents
c. Partner
d. Teachers
e. Other health workers
11. Are you aware of your HIV status?
Yes No
12. If not, are you willing to undergo HIV testing?
Yes No
13. Should HIV testing be made mandatory for every dental student?
Yes No
14. Do you support premarital HIV testing?
Yes No
15. Do you think both HIV-infected and non-infected patients should be treated in same dental clinic?
Yes No

Contd...

Table 1: Contd...

- 16. Do you think dentists are high risk group for HIV infection?
Yes No
 - 17. Is there need for extra infection control precaution when treating HIV-positive patient?
Yes No
 - 18. Do you wear gloves while washing dental instruments?
Yes No
 - 19. Are you willing to participate in rendering dental care to HIV-infected patient?
Yes No
 - 20. Students with AIDS should go to special schools for those with AIDS.
Agree Disagree
 - 21. People infected with HIV should be isolated in a special center.
Agree Disagree
 - 22. Do you think your professional education has provided you with enough information to work safely with AIDS patients?
Agree Disagree
 - 23. In your opinion do you believe that you should have the right to refuse to treat an HIV-positive patient?
Yes No
 - 24. Are you concerned that working on HIV-positive patient may endanger your health?
Yes No
 - 25. Do you believe HIV-positive patient must be supported, treated and helped?
Yes No
- AIDS = Acquired immunodeficiency syndrome,
HIV = Human immunodeficiency virus,
HAART = Highly active antiretroviral therapy

Table 2: Demographic characteristics

Characteristics	Frequency	Percentage
Age group (years)		
17-21	126	21
21-23	360	60
Above 23	114	19
Gender		
Female	402	67
Male	198	33
Marital status		
Unmarried	537	89.5
Married	63	10.5

Table 3: HIV/AIDS knowledge

	Excellent	Good	Fair	Poor
Knowledge about AIDS	28%	54%	11%	7%

AIDS: Acquired immunodeficiency syndrome; HIV: Human immunodeficiency virus

Table 4: Recommendation

	Hospital	Miracle center	Traditional healers	No response
Recommendation	86%	16%	21.5%	3%

important source of information about HIV/AIDS was electronic media (63.5%) followed by newspaper (57%) and text books (57%) [Table 6]. The study showed that there were very less involvement of parents (16.6%) regarding sharing the knowledge about AIDS/HIV [Table 7].

Only 43% subjects were aware about their own HIV status and only 58% were willing for HIV testing [Table 8]. When asked about their attitude towards PLWHA, 43% subjects responded that they have the right to refuse the treatment and 29% said they should be quarantined [Table 9]. Five parameters were given regarding the risk perception, 67.6% subjects said that dentists are at high risk group, whereas 44.4% are not worried about HIV infection [Table 10].

DISCUSSION

The response rate obtained in this survey was high and comparable with other surveys. Most of the survey has included less than 200 subjects, but in our study 600 subjects were involved. There was disproportionate gender distribution that was similar to the findings in study conducted by Soukaina T Raylat^[10] on Jordanian dental students. We found that students showed moderate knowledge with respect to modes of HIV transmission and infection control practices. A similar finding was reported by Sadeghi M^[11] among Iranian dental students and by Azodo *et al.*,^[12] among Nigerian dental nursing students. Nearly one-third (34%) of the students thought that HIV/AIDS could be acquired by the breast feeding and one-fourth (25%) thought that HIV could be contracted by kissing an infected person, which is a misconception.

The attitude and willingness to treat HIV/AIDS patient was assessed and found an overall negative attitude of students toward HIV/AIDS patients. Shan V *et al.*,^[13] and Azodo *et al.*,^[12] also reported dental students having negative attitude toward HIV/AIDS. According to our study, electronic media is main source of information regarding HIV/AIDS. Whereas in study conducted by Ajayi YO and Ajayi EO,^[14] main source of information was health workers and textbooks. This negative attitude of the dental students will have a direct impact on the treatment of the PLWHA.

In this study, only 43% subjects were aware of their HIV status and 58% were willing for HIV testing. Kopacz *et al.*,^[15] in their study reported that 84% were aware of their HIV status and only 20% were willing for HIV testing. It is quite alarming that more than 50% of the students are not aware of their HIV status.

Table 5: Mode of transmission

	Unprotected sex	Breast feeding	Blood transfusion	Unsterilized instrument	Sharing of sharp instruments	Kissing
Mode of transmission	78.5%	34%	68%	62%	49.5%	25%

Table 6: Source of information

	Electronic media	Newspaper	Health workers	Text books	Internet
Source of information	63.5%	57%	31.5%	57%	53.5%

Table 7: Interpersonal communication

	Classmates/friends	Parents	Partner	Teachers	Siblings	Others
Interpersonal communication	78.5%	16.6%	15%	31.3%	42.5%	17.4%

Table 8: Attitude toward HIV testing

	Aware of HIV status	Willing for HIV testing	Mandatory HIV screening	Mandatory premarital HIV testing
Attitude towards HIV testing	43%	58%	71%	67.5%

HIV: Human immunodeficiency virus

Table 9: Attitude toward PLWHA

	Right to refuse treatment	Segregation	Quarantine	Support and treatment	Willingness to render dental care
Attitude toward PLWHA	43%	61%	29%	87.8%	65%

PLWHA: Patient living with HIV and AIDS

Table 10: Risk perception

Parameters	Yes (%)	No (%)
Dentists are at high risk group	67.6	32.4
Need for extra precaution	82.4	17.6
Wearing gloves while washing instruments	68.3	31.7
Need to be informed by dentist if patient is HIV positive	81.2	18.8
Worried about HIV infection	55.6	44.4

HIV: Human immunodeficiency virus

The results of this survey can be interpreted as true representation of HIV/AIDS knowledge and attitude among dental students of NCR. Dental students have repeatedly reported good knowledge regarding HIV/AIDS with some misconception that was also supported by our survey findings.

CONCLUSION

From the present study, we conclude that knowledge regarding HIV/AIDS should be included from first year of dentistry or from school level, so that they are well trained in treating the PLWHA. Therefore, students must be made well aware of the importance of treating HIV/AIDS patients and help the society from this drastic disease. It is recommended that a comprehensive training of the dental students be done, to promote a good delivery of accurate information on HIV/AIDS to the public and to provide proper patient care. Dental students should work with different Non Governmental Organizations (NGOs) working

for AIDS patients. A separate dental unit should be established in a hospital specially for treating PLWHA and dental students should be posted there for more exposure to the HIV/AIDS patients. Emphasis must be placed on in-depth discussion on HIV/AIDS issue by experienced health workers and lectures with dental students in order to clarify existing misconceptions and discourage discriminatory behaviour.

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