Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies NLM ID: 101716117

Journal home page: www.jamdsr.com doi: 10.21276/jamdsr Indian Citation Index (ICI) Index Copernicus value = 91.86

(e) ISSN Online: 2321-9599;

(p) ISSN Print: 2348-6805

Original Research

Assessing the levels of HIV-related knowledge and attitudes toward HIVinfected patients among Dental Professionals: A cross-sectional study

¹Irfan Ali, ²Monika Kumari

¹Tutor, Department of Public Health Dentistry, Government Dental College and Hospital, Srinagar, Jammu and Kashmir, India;

²Senior Lecturer, Department of Public Health Dentistry, Dental College Azamgarh, Azamgarh, Uttar Pradesh, India

ABSTRACT:

Introduction: HIV/AIDS is a chronic disease because virions contain an enzyme that allows viral DNA to be integrated into the host cell genome, where it can persist. The disease will kill all HIV-infected people who exhibit AIDS-like symptoms. The human immunodeficiency virus weakens the host immune system, making the host more vulnerable to opportunistic infections and other pathogens such as tuberculosis and malaria. **Materials and Methods:** Apre validated questionnaire was used to assess the Knowledge and Attitude of Dental professionals. About 300 Dental professionals are included in the study and only 290 have responded.EthicalClearance was obtained from Institutional review board.Statistical analysis was doneusing using Statistical Package For Social Sciences (SPSS) 18.0 (SPSS Inc., Chicago, IL, USA). **Results:** Table I summarises the reported knowledge of AIDS. Only 5.6 percent claimed comprehensive knowledge, 86.2 percent had more than average knowledge, 7.6 percent had poor knowledge, and 0.7 percent had none.). Table 3 summarises current knowledge of HIV infection in relation to transmission and susceptibility to cross-infection measures. We can see from the coefficient regression that the result is highly significant (0.000*). **Conclusion**: Dental Professionals who are at risk of transmission and are responsible for the care and treatment of HIV carriers should have a thorough understanding of HIV/AIDS, and positive attitudes and behaviours should be encouraged. **Keywords:** HIV, Aids, Dental professionals

Received: 11 February, 2022

Accepted: 16 March, 2022

Corresponding author: Irfan Ali, Tutor, Department of Public Health Dentistry, Government Dental College and Hospital, Srinagar, Jammu and Kashmir, India

This article may be cited as: Ali I, Kumari M. Assessing the levels of HIV-related knowledge and attitudes toward HIVinfected patients among Dental Professionals: A cross-sectional study. J Adv Med Dent Scie Res 2022;10(4):158-162.

INTRODUCTION

HIV infections have been reported in all states and territories in India since HIV was first identified among sex workers in Chennai in 19861. The estimated prevalence of HIV infection among people aged 15-49 years is approaching 1%, and at least four million people are infected, making it the country with the world's second highest number of HIV positive people.^[1] HIV/AIDS is a chronic disease because virions contain an enzyme that allows viral DNA to be integrated into the host cell genome, where it can persist. The disease will kill all HIV-infected people who exhibit AIDS-like symptoms. The human immunodeficiency virus weakens the host immune system, making the host more vulnerable to opportunistic infections and other pathogens such as tuberculosis and malaria.^[2]

Oral health problems have been identified as a major health concern in HIV-infected people. Oral manifestations of HIV/AIDS, such as thrush, warts, periodontal diseases, and rapidly progressing dental decay, affect a large proportion of HIV/AIDS patients. Oral pain and swallowing difficulties (dysphagia) are obstacles to successful treatment adherence. ^[3]Oral health is an important component of overall medical care for HIV patients. Oral care for HIV-positive people is critical for improving nutritional intake, medication tolerance/effectiveness, treatment success rate, and overall quality of life.^[4]

The spread of HIV in any community is influenced in part by its members' knowledge of safe sexual practises and HIV prevention. ^[5]It is well known that HIV infection has a negative impact on oral health, with 40–70% of HIV-positive individuals developing

oral complications such as Kaposi sarcoma, oral candidiasis, and leukoplakia as the disease progresses. It is not uncommon for dentists to be the first to detect oral manifestations of HIV infection in individuals with unknown positiveHIV status. While dental practitioners have a moral obligation to provide comprehensive oral care of high quality to PLHIV and treatment denial based on HIV status is unacceptable, it has been reported that unmet dental needs are common among this vulnerable group of patients.^[6]Dentists have a professional and ethical obligation to provide equal access to oral healthcare to all people. According to the World Health Organization (WHO), all dentists must treat HIVpositive patients.^[7]

AIDS phobia has been linked to a lack of knowledge about HIV and its transmission routes, among other things. It has been suggested that health care workers are inadequate in managing and counselling HIV and AIDS patients, and that they lack sufficient knowledge of symptoms as well as how to properly diagnose and treat infected patients. A study of medical students in the United States of America found that more than half of those polled believed that treating AIDS patients could be dangerous and that their education had not prepared them to do so safely. In a UK study, dentists demonstrated good knowledge of HIV and AIDS-related oral lesions but were less familiar with HIV and AIDS transmission routes. ^[8]Several studies have been conducted to assess dental workers' knowledge of AIDS and attitudes toward HIV-infected patients. [9] The current study sought to address this gap in existing knowledge by administering a questionnaire designed to assess dentalprofessionals' knowledge and attitude of HIV infection.

MATERIALS AND METHODS

The study was conducted in the year 2018 in D.J College of Dental Sciences and Research, ModinagarA pre-validated questionnaire was taken from Kitaura H et al's study, in which the author assessed the knowledge and attitudes of Japanese dental health care workers toward HIV-related disease. The questionnaire was distributed to a total of 300 students, including dental (undergraduate and postgraduate) students, dental assistants, and hygienists, and we received 290 responses.

INCLUSION/EXCLUSION CRITERIA

All 3rd year, final year, Interns and Post graduates, dental assistants, and hygienists are included in the study. Members of the student union who assisted with data collection were excluded from the study sample.

ETHICAL CLEARANCE

The permission to conduct the study was obtained from the institute's director-principal. The clearance was obtained from the institutional ethical committee. The study was explained to the students at these institutes, and informed consent was obtained from those who agreed to participate.

DATA COLLECTION

During data collection, students were asked to fill out questionnaires about their knowledge and attitudes. The students answered the questions in the classroom under the supervision of the person in charge of the questionnaire. The questions were based on information from the literature about HIV infection and AIDS. Respondents were specifically asked about their knowledge, their views on AIDS educational issues, knowledge about the modes of transmission of HIV infection, risk factors, and methods of HIV transmission prevention. They were also asked about opportunistic diseases associated with HIV infection and their attitudes toward HIV-infected patients. The significance of AIDS education issues was graded as 'yes,' 'no,' or 'uncertain.'The knowledge of AIDS was assessed using 'yes' or 'no' responses. Additional questions probed concerns about the rising risk of HIV infection in the dental office, attitudes toward providing dental care to HIV-positive patients, and attitudes, knowledge, and concern about opportunistic infections. There were also questions about how to prevent HIV infection transmission in dental surgery. The attitude-related questions assessed dental professionals' willingness to provide dental care to HIV/AIDS patients, examined anxieties about the increasing risk of HIV infection in the dental office, and attitudes toward providing dental care to HIVpositive patients.

STATISTICAL ANALYSIS

All the data from the questionnaires was entered intoMicrosoft Excel® and later downloaded to SPSS® forWindows release 19 (SPSS Inc., Chicago, IL, USA) forstatistical analysis. Coefficient Regression is used to see the relationship between the responses.

RESULTS		
Table 1: Level of up-to-date	knowledge on	AIDS

Level	Score	Percentage
None	2	0.7
Poor	22	7.6
More than average	250	86.2
Comprehensive	16	5.6

Table 2: The score and percentage of the total subjective responses concerning AIDS-related education

Question	Yes	No	No responseor uncertain
Have you been given AIDS-related	135(46.6%)	150(51.7%)	5(1.72%)
education?			
Do you feel it is necessary to have	281(96.8%)	0(0%)	9(3.1%)
education?			

Table 3: The score of response to questions concerning AIDS

Question	Yes	No	No Response
Do you think that it is possible to be infected with HIV by kissing?	6	284	0
Do you think that people can be infected with HIV by using the	10	279	1
sametoilet or bath which HIV-infected persons have used?			
Do you think that people can be infected with HIV through	22	265	3
mosquitobites?			
Do you think all infants born from HIV-positive mothers are also	52	238	0
infected with HIV?			
Do you think it is possible to be infected with HIV from animals	42	244	4
such ascats, dogs and monkeys?			
Do you think it is possible to be infected with HIV by drinking with	6	282	2
a glassused by a AIDS patients?			
There is no danger of HIV infection from ordinary dental treatment	95	205	0
HIV can be killed by the use of an autoclave at 120°C for 30 min	240	50	0
An isopropyl-alcohol, ethanol, sodium hypochloride	238	48	4
solution, glutaral dehyde and formal dehyde solution are proper			
antiseptic solution tosterilize HIV			
The sterilization of HIV by X-rays and ultraviolet rays are	84	204	2
propermeasures.			
HIV can be found mainly in blood, semen, fluid from vaginal region	284	6	3
andmothers' milk			
HIV can be found mainly in saliva and tears	72	215	3
The HIV transfers more easily than the other bacterial infections	64	226	0
The HIV infects more easily than HBV and HCV	68	221	1
The chance of HIV infection is higher for the medical or dental	214	74	2
workerthan other people			
The HIV can grow outside human and animals	106	182	2
Almost all adults are infected with protozoa which can cause	102	185	3
carinipneumonia and cytomegalovirus			
The HIV infection rate through unprotected heterosexual sex is 30- 50%	90	200	0
In the event of accidentally pricking oneself with a needle	89	200	1
carryingcontaminated HIV-positive blood, the chance of infection is			_
5%			
The average length of time for a seropositive individual to develop	244	44	2
fullblown AIDS is 8-13 years			
The average period needed to acquire antibodies to HIV after the	210	79	1
initialinfection is 6-8 weeks			
The presence of antibodies to HIV is evidence of disappearance	36	254	0
of HIV from the body			
There is an age group which is easily infected by HIV	18	272	0
An opportunistic pathogen is an organism which causes the	253	34	3
diseasewhen an immunity response is depressed			
Do you think that Indian people are more resistant to HIV	6	282	2
infection than people in the other countries?			
Coefficient Regression	P Value- 0.000* (Highly Significant)		

Table 4: The fear and attitudes towards AIDS

Question	Answer	Score (%)
Do you think that dental patients with HIV infection will	Yes	238(82.1%)
increase in near future?	No	6(2.06%)

	Uncertain	45(15.5%)
	No response	1(0.3%)
Are you anxious about the	Yes	265(91.4%)
increased risk of HIV-infection in the dental office?	No	18(6.3)
	No response	7(2.5%)
Are you afraid of infection during More afraid the dental	More afraid	104(35.9%)
treatment of AIDS/HIV- Afraid infected persons?	Afraid	94(32.5%)
	A little afraid	64(22.1%)
	Not afraid	20(6.9%)
	Uncertain	7(2.5%)
	No response	1(0.4%)
Do you think that AIDS is a	Yes	268(92.5%)
fearful disease?	No	16(5.6%)
	Uncertain	5(1.8%)
	No response	1(0.4%)
Is your attitude towards treatingHIV-positive and negative	Yes	48(16.6%)
patients the same?	No	22(7.6%)
	Uncertain	218(75.2%)
	No response	2(0.6%)

Table I summarises the reported knowledge of AIDS. Only 5.6 percent claimed comprehensive knowledge, 86.2 percent had more than average knowledge, 7.6 percent had poor knowledge, and 0.7 percent had none. Approximately 46.6 percent of dental professionals have received AIDS-related education, and 96.8 percent believe that AIDS-related education is required (Table 2). Table 3 summarises current knowledge of HIV infection in relation to transmission and susceptibility to cross-infection measures. We can see from the coefficient regression that the result is highly significant (0.000^*) . It is worth noting that respondents were almost evenly divided on whether normal dental treatment posed any risk of HIV infection, with a relatively high proportion believing that needlestick injury carried a 5.0 percent chance of zero positivity. Table 4 shows the respondents' attitudes toward AIDS. The vast majority of respondents (82.1 percent) predicted that the number of HIV-infected dental patients would rise in the near future. 91.4 percent were concerned about the increased risk of HIV infection in the dental office. Concerns about treating HIV-infected dental patients were higher than in HIV-negative patients, with 35.9 percent more afraid, 32.5 percent afraid, 22.1 percent a little afraid, 6.9 percent not afraid, and 2.5 percent uncertain. To put it another way, roughly 50.0 percent of all respondents were concerned about treating HIV-infected dental patients. Approximately 92.5 percent believe that AIDS is a frightening disease, while 1.5 percent are unsure. In terms of attitudes toward treating HIV-positive and HIVnegative patients, the same 16.6 percent said yes and 75.2 percent said they were unsure. In terms of education received, it was notable that 67.2 percent were unsure, highlighting the educational deficiency. The majority of respondents believed that gloves, masks, and eye protection were required during routine care. They also believed that sterilising and disinfecting instruments, as well as changing gloves

after each patient, were essential in preventing disease transmission.

DISCUSSION

Oral health disparities exist within HIV-infected populations in terms of individuals' perceptions of their oral health status, oral care seeking behaviour, and levels of unmet dental needs. ^[6] Many studies have been conducted to assess dental students' and practitioners' knowledge and attitudes toward the treatment of HIV-infected people. This study, on the other hand, assessed the knowledge and attitudes of dental professionals such as dental assistants and hygienists.

However, these statistics are scarce in India. Nonetheless, the sources of AIDS knowledge reported here for dental health care workers are similar to those previously reported.^[9] It appears that more than half of dental workers (86.2 %) have current knowledge of AIDS, which was consistent with the findings of Kitaura et al, who found 80.5%. In this study, 10.9 percent of professionals believed that mosquito bites could cause HIV transmission, and 14.4 percent believed that transmission could occur through animals such as cats, dogs, and monkeys, while 84.1% responded negatively. These findings must be interpreted in light of the fact that most Indians are aware that the encephalititis virus can be transmitted by mosquitos and thus likely assumed that HIV could be transmitted in the same way. Approximately 83.7 percent of medical or dental workers have a higher risk of HIV infection than the general population. This finding contrasts with that of Kitaura et al, who found 50.5 percent. Table 4 shows that approximately 91.4 percent of professionals are concerned about the increased risk of HIV infection in dental offices, which is similar to the 82.8 percent found in the Kitaura et al study.In terms of cross infection, most agree that HIV does not transmit as easily as HBV and HCV and that the cross-infection measures proposed were largely adequate; indeed, many workers believe that HIV is more easily sterilizable than HBV and HCV. Despite this, many people believed that HIV could be transmitted as easily during dental treatment.

CONCLUSION

Finally, the importance of HIV/AIDS as a public health problem around the world and in our country should be emphasised more, and public awareness should be increased. Dental Professionals who are at risk of transmission and are responsible for the care and treatment of HIV carriers should have a thorough understanding of HIV/AIDS, and positive attitudes and behaviours should be encouraged.

REFERENCES

- 1. Kermode M, Holmes W, Langkham B, Thomas MS, Gifford S. HIV-related knowledge, attitudes & risk perception amongst nurses, doctors & other healthcare workers in rural India. Indian Journal of Medical Research. 2005;122(3):258.
- Aggarwal A, Sheikh S, Pallagatti S, Bansal N, Goyal G. Comparison of knowledge, attitudes and behaviour of dental and nursing students towards HIV/AIDS. J Med Med Sci. 2012;3(8):537-45.
- 3. Azodo C, Umoh A, Ezeja E, Ukpebor M. A survey of HIV-related knowledge and attitude among dental

nursing students in South Western Nigeria. Benin Journal of Postgraduate Medicine. 2007;9(1).

- 4. Oberoi SS, Sharma N, Mohanty V, Marya C, Rekhi A, Oberoi A. Knowledge and attitude of faculty members working in dental institutions towards the dental treatment of patients with HIV/AIDS. International scholarly research notices. 2014;2014.
- 5. Baytner-Zamir R, Lorber M, Hermoni D. Assessment of the knowledge and attitudes regarding HIV/AIDS among pre-clinical medical students in Israel. BMC research notes. 2014;7(1):1-2.
- Abou El Fadl RK, Abdelmoety A, Farahat Z, Hussein MA. Assessing the levels of HIV-related knowledge and attitudes toward HIV-infected patients among undergraduate dental students: a cross-sectional study. HIV/AIDS (Auckland, NZ). 2019;11:83.
- 7. Patil PB, Sreenivasan V, Goel A. Knowledge of HIV/AIDS and attitude of dental students towards HIV/AIDS patients: A cross-sectional survey. Journal of education and ethics in dentistry. 2011;1(2):59.
- Nasir EF, Åstrøm AN, David J, Ali RW. HIV and AIDS related knowledge, sources of information, and reported need for further education among dental students in Sudan-a cross sectional study. BMC Public Health. 2008;8(1):1-9.
- Kitaura H, Adachi N, Kobayashi K, Yamada T. Knowledge and attitudes of Japanese dental health care workers towards HIV-related disease. Journal of dentistry. 1997;25(3-4):279-83.