

# Knowledge, Attitudes and Practice of HIV/aids among the Clinical Dental Students in a Dental College in Kerala - Original research article

Dr. Pooja Latti<sup>1</sup>, Dr. Thara Bhavani<sup>2</sup>, Dr. Subramaniam R.<sup>3</sup>, Dr. Dennis Johny<sup>4</sup>

<sup>1</sup>Reader and Head, Department of Public Health Dentistry  
Annoor Dental College and Hospital, Muvattupuzha, Kerala  
Phone number: 9916260249, E-mail id: drpooja\_l@yahoo.co.in

<sup>2</sup>Lecturer, Department of Public Health Dentistry  
Annoor Dental College and Hospital, Muvattupuzha, Kerala  
Phone number: 8593021906, E-mail id: tharabhavanims@yahoo.com

<sup>3</sup>Reader and Head, Department of Public Health Dentistry  
Indira Gandhi Institute of Dental Sciences, Kothamangalam, Kerala  
Phone number: 9633381024, E-mail id: subbds@gmail.com

<sup>4</sup>Lecturer, Department of Public Health Dentistry  
Annoor Dental College and Hospital, Muvattupuzha, Kerala  
Phone number: 9400455428, E-mail id: dennis94.mk@gmail.com

## Address for correspondence

Dr. Pooja Latti  
Reader and Head, Department of Public Health Dentistry  
Annoor Dental College and Hospital, Muvattupuzha, Kerala  
Phone number: 9916260249, E-mail id: drpooja\_l@yahoo.co.in

## Abstract

**Introduction:** India has the third largest HIV epidemic in the world, with 2.1 million people living with HIV and with 88,000 new cases with HIV infection as per the UNAIDS data 2018. Healthcare professionals have to be sufficiently trained, so that they can play a vital role in detecting the HIV/AIDS cases and thus combatting this pandemic.

**Objective:** To assess the knowledge, attitudes and practice regarding HIV/AIDS among the clinical dental students of a dental college in Kerala.

**Methodology:** A cross sectional questionnaire based survey was conducted among 96 clinical dental students who were willing to participate in the study. A structured questionnaire that included 19 questions was distributed to the participants. The returned questionnaires were coded and analyzed using SPSS software version 21 and results were expressed as numbers and percentage of respondent for each question.

**Results:** The results of the study showed that all the respondents (100%) were aware about the diagnostic test for HIV and also were aware of oral manifestations of HIV. 22.9% of the students were of the opinion that a dentist is somewhat likely to be infected by providing care to HIV patients. 30% of the respondents were unaware that HIV can be transmitted by unscreened blood transfusions. And 40.6% of the respondents were of the opinion that if a dentist is suffering from HIV he must not be allowed to practice.

**Conclusion:** The present study revealed that dental students had adequate knowledge regarding HIV/AIDS but showed a negative attitude in treating HIV/AIDS patients and also in working with HIV/AIDS infected colleague.

**KeyWords:** HIV/AIDS, knowledge, attitude, practice, clinical dental students.

## INTRODUCTION

HIV/AIDS epidemic has emerged as one of the most serious and massive health problems within about two decades in India<sup>1,2</sup>. India has the third highest number of people infected with HIV. According to the estimates from (United Nations Programme on human HIV and AIDS), there were 36.9 million people living with HIV globally and 1.2 million people have died of AIDS IN 2014. There were about 2.0 million new infections worldwide in 2015 or about 5600 new infections per day. HIV has emerged as a major public health challenge with an estimated 2.24 million persons living with HIV in India. Health education, mainly Information Education and Communication (IEC) and behavior change communication is the key strategy for tackling this epidemic. HIV/AIDS cases are constant rising in the developing countries like India, healthcare professionals are essential to be sufficiently trained, so that they can play a vital role in combatting this pandemic.<sup>3</sup>

Oral health issues have been recognized as a significant health concern in HIV-infected individuals. Oral manifestations of HIV/AIDS, such as thrush, warts, periodontal diseases and rapidly succeeding dental decay, occur in a very high percentage of people living with HIV/AIDS. HIV/AIDS is a chronic disease because the virions contain an enzyme that enables the addition of the viral DNA into the host cell genome where it can endure. The human immunodeficiency virus weakens the host immune system and with a weakened immune system the host is then more vulnerable to opportunistic infections and other pathogens, e.g. tuberculosis and malaria.<sup>4</sup>

Appraisal of the knowledge and attitudes of dental students toward HIV and AIDS –afflicted patients is extremely essential to decide the efficiency of the education and the opportunities offered to students by the colleges, in order to know about the disease and the suitable way to treat with these patients.

Thus, the present study was conducted to determine the knowledge, attitudes and practice regarding HIV/AIDS among the clinical dental students of a dental college in Kerala.

## METHODOLOGY

Study population and study design:

The present study was a cross-sectional questionnaire-based study, conducted on 96 clinical dental students (3rd year, final year and house surgeons) of a dental college in Ernakulam district, Kerala. The students who were willing to participate in the study were included based on convenience sampling. The participants were approached directly by the researchers and asked to complete the questionnaire with the researchers present.

### **Ethical considerations:**

Ethical approval was sought from ethical committee of the college prior to the commencement of the study.

### **Questionnaire:**

The instrument used in the study is a structured questionnaire designed in English language. In the beginning of the questionnaire it consisted of basic information regarding the participant like age, sex and year of study. There were 19 questions pertaining to the knowledge, attitude and practice regarding HIV/AIDS and the questions used were mainly close-ended.

### **Statistical Analysis:**

All returned questionnaires were coded and analyzed. Results were expressed as a number and percentage of respondents for each question and were analyzed using the SPSS Version 21 software (SPSS Inc., Chicago, IL, USA).

## RESULTS

The present study was conducted among 96 subjects among whom 89.6% were females (graph1). Among the 96 subjects 30.2% constituted the third years, 44.8% the final year students and 25% were interns.

When asked if the students had come across any HIV positive patients in their clinical postings, majority of them (92.7%) said no. Most of the students (45.8%) said that they will be somewhat worried if they have to treat a HIV positive patient. 22.9% of the students said they think a dentist is somewhat likely to be infected by providing care to HIV patients.

Majority of the respondents (90.6%) were aware that HIV can be spread by sharing a needle. It was surprising to note that 30% of the respondents were unaware that HIV can be transmitted by unscreened blood transfusions. And 20.8% said that mosquito bites can transmit HIV.

Majority (60%) of the respondents were of the opinion that aerosol from handpiece can be a vehicle for HIV transmission and 27% of them were of the opinion that HIV can spread by coughing and sneezing.

80.2% of the respondents were aware that HIV transmission can be reduced by abstinence from sexual intercourse and 91.7% said condoms can help in preventing HIV transmission.

When asked about transmission of HIV infection from mother to child, 62.5% said that it can be spread during pregnancy, 82.3% said its spread during child birth and most of them 38% said it cannot be transmitted through breast feeding.

Only 57.3% of the respondents said that testing for Sexually Transmitted Infections among patients can be part of HIV prevention. And all the respondents(100%) were aware about the diagnostic test for HIV and also were aware of oral manifestation of HIV.

40.6% of the respondents were of the opinion that if a dentist is suffering from HIV he must not be allowed to practice and 19% of them said that they would stop working with their colleague if they are infected with HIV.

## DISCUSSION

The AIDS epidemic is continuing to grow<sup>5</sup>;

global estimate indicated that over 40 million people are infected<sup>6</sup>. HIV infection is one of the most devastating health problem that mankind has ever faced.<sup>7-10</sup> The fact that the number of HIV-infected patients under dental care is expected to increase highlights the importance of providing health care, part of which dental treatment, to all individuals indiscriminately.<sup>6</sup> All health care workers especially physicians, dentist and nurses are at risk of occupationally acquired HIV infections from close contact with blood and other body fluids of patients.<sup>11-13</sup> Thus, assessing the knowledge, attitude and practice of the students of these professions about diseases like HIV/AIDS is very important as they will take care of HIV/AIDS patients in the future.

The present study was a cross sectional study conducted to assess the knowledge, attitude and practices regarding HIV/AIDS among the clinical dental students of a dental college in Kerala.

Results of this study revealed that the participants had satisfactorily knowledge regarding HIV/AIDS but there were certain misconceptions and knowledge deficits.

The results of our study showed that the majority of them had not come across any HIV patients in the clinic (92.7%). 90.6% of the respondents were aware that sharing a needle can spread HIV infection. The results were in accordance with the study conducted by Aggarwal A in Haryana<sup>3</sup>.

80.2% of the respondents were aware that HIV transmission can be reduced by abstinence from sexual intercourse and 91.7% said condoms can help in preventing HIV transmission. These were inconsistent with the study conducted by Jain M. in Udaipur<sup>7</sup>.

Majority (60%) of the respondents were of the opinion that aerosols from handpiece can be a vehicle for HIV transmission. This result was in contrast with the result of the study conducted by Al Naimi R in Mosul<sup>14</sup>. This shows the lack of awareness regarding mode of spread as spreading through aerosol is consid-

ered to be very rare. It was noteworthy to see that all the respondents were aware regarding the oral manifestation of HIV. This was consistent with the study conducted by Shan V in 2011<sup>3</sup>. Majority of the students were opinion that HIV infection can be transmitted from mother to child.

In a study conducted by Aggarwal et al. in Haryana<sup>4</sup> showed that the dental students had a positive attitude towards treating and managing HIV patients. This was in contrast to our results wherein the students showed slight negative attitude towards treating an HIV patient and they said that they will be somewhat worried. Also it was a shocking observation that the respondents said that they would not work with an HIV infected colleague and 40.6% said if a dentist is infected with HIV, he must not be allowed to practice. Similar results were observed in a study conducted by Jain M et al among dental students in Udaipur<sup>7</sup>.

### CONCLUSION

The present study revealed that dental students had adequate knowledge regarding HIV/AIDS but showed a negative attitude in treating HIV/AIDS patients and also in working with HIV/AIDS infected colleague. Thus, there is need to cultivate non-judgmental attitude towards the care of HIV/AIDS infected people and this can be achieved by conducting systematic educational and awareness programs so as to clarify all the misconceptions and thus eliminate the discriminative behavior of the dental students towards the HIV/AIDS patients.

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