



RESEARCH ARTICLE

KNOWLEDGE AND ATTITUDE OF DENTAL STUDENTS TOWARDS HIV/AIDS PATIENTS

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ABSTRACT

**Aim:** to study the knowledge and attitude of dental students towards HIV/AIDS patients.

**Background:** In the present generation, due to the development of various successful Anti-retroviral therapies, the life span of the infected individuals has increased. Hence these patients will require increasingly competent and compassionate health care services, including oral health care.

**Materials and Methods:** This survey was conducted on 100 dental students in the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year students of a private dental college. The students completed a predesigned self-administered questionnaire comprising 20 questions assessing the knowledge, attitude and willingness to treat HIV/AIDS patients.

**Result:** The survey was completed by 100% of the students. The analysed results proved that more than half of the population in the study exhibited good knowledge and a few proclaimed to have excellent knowledge. The mean knowledge score is 73.67%, among all the considered years of study. Despite their good level of knowledge, only 58% of the study population displayed a positive attitude (non professional attitude) toward HIV/AIDS, whereas the remaining 42% of the population were negative or neutral towards the treatment of HIV.

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INTRODUCTION

The main cause of acquired immunodeficiency syndrome (AIDS) is the Human Immunodeficiency Virus (HIV), which is highly epidemic and still continues to be world's 4<sup>th</sup> most deadliest disease causing pathogen [1]. India being the second most populated country in the world, has over one billion inhabitants. Of this number, it is estimated that around 23.9 lakh people are currently suffering with HIV. HIV / AIDS has caused estimated deaths of 25 million globally and has generated profound demographic changes in the most heavily affected countries in last 27 years [1]. Hence, the people affected by this disease require compassionate and competent health care, from which they are deprived. Most importantly they require oral health care. Oral health being an essential aspect of overall medical care for individuals with HIV, also plays a vital role in improving their intake of nutrition, effectiveness and tolerance to medication, treatment success rate, and quality of life [2]. HIV treatment is associated with the oral conditions involving a spectrum of potentially painful and health compromising conditions. People living with HIV/AIDS are subject to a spectrum of potentially painful and health-compromising oral conditions that are associated with

HIV disease and/or HIV treatment [3,4]. Recent international studies indicate that oral lesions like oral candidacies and Kaposi's sarcoma occur in as many as 50 to 70 percent of all HIV/AIDS cases [5]. The herpes infections are more severe and atypical in AIDS patients. Multiple necrotic ulcers may be present in atypical locations. The outbreaks may progress to more extensive and persistent locations. There may be more frequent recurrences or chronic and nearly continuous ulcerations as the HIV related immunosuppression progresses. Patients with the human immunodeficiency virus (HIV) infection who experience the first or recurrent HSV-2 episodes can develop severe and extensive lesions, which may become difficult to control by the standard antiviral therapy [6].

HIV/AIDS diagnosis and its disclosure causes a spectrum of changes and challenges in the family structure, socioeconomic dimension of the family, it also differs based on the infected individual and their coping strategies. Definitely it burdens the health professionals in order to understand their specific response to the threat and to plan, implement relevant care to overcome it and to help the individual to lead a productive life.[7] Global AIDS-related deaths peaked at 2.3 million in 2005, and decreased to 1.6 million by 2012. Hence various treatment procedure have been developed predominantly. An estimated 9.7 million people in low-income and middle-income countries had started antiretroviral therapy by 2012 [8].

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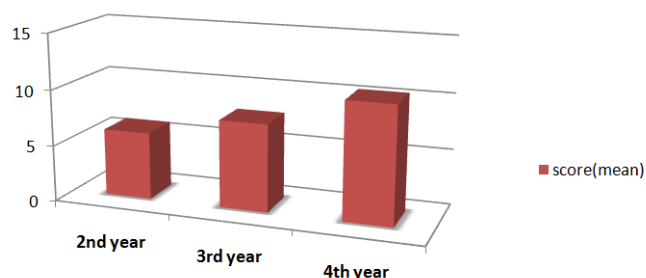
However the success of these procedures needs to reach every individual worldwide. This promotes the patients diagnosed with HIV to proceed for treatment. It is the responsibility of every dentist to assess and provide them oral health care, implement confidence and encourage them to proceed for treatment.

### MATERIALS AND METHODS

The method employed was the sampling and survey instruments and statistical analysis. The survey was conducted on 100 dental students, consisting of 2<sup>nd</sup> years, 3<sup>rd</sup> years and 4<sup>th</sup> years from the Saveetha dental college, Chennai. Based on previous studies, a self-administered, structured questionnaire was used as the survey instrument [9]. This study was done in Chennai, Tamil Nadu state to assess and gain knowledge about the knowledge and attitude of dental students in the Indian society. The survey was conducted online utilizing the website apps.surveypplanet.com. The randomised cross-sectional study was conducted among the 100 people. A questionnaire was prepared in English that enlisted 20 questions that primarily focussed on their knowledge and attitude towards the treatment of HIV infected patients. The sample of 100 students was a randomly selected group of individuals. They were selected after applying a multi-stage random sampling method for selection. They were previously asked questions before the actual questions in the questionnaire in order to avoid bias in our study. The survey had utilised the Survey planet website app. Through the app the survey had been taken, the collected data were organised and analysed. The 100 participants were then required to answer all the questions. The questionnaires were then reviewed, analysed and evaluated. Data management and statistical analysis were performed using Statistical Package for Social Sciences (SPSS version 18.3; SPSS Inc., Chicago, IL, USA).

### RESULTS

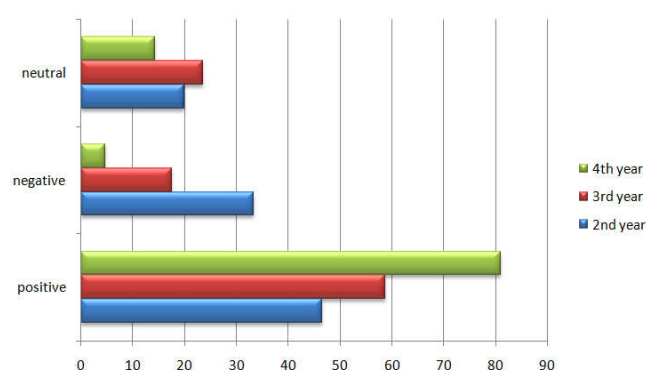
According to Figure 1 the mean knowledge score of the 2<sup>nd</sup> years is 6.02, the 3<sup>rd</sup> years is 7.82 and 4<sup>th</sup> years is 10.47. The mean knowledge score is 73.67%, among all the considered years of study. Various statements were proposed for this purpose which required the subject to give a true/false response. Based on the accuracy and precision of the statement, they were evaluated.



According to figure. 2 the 4<sup>th</sup> year students exhibit maximum positive attitude of about 80.95%, followed by the 3<sup>rd</sup> years exhibiting 58.8% and the 2<sup>nd</sup> years exhibiting least positive attitude of about 46.6%. Despite their good level of knowledge, only 58% of the study population considered on the whole displayed a positive attitude (non professional attitude) toward HIV/AIDS, whereas the remaining 42% of the

population were negative or neutral towards the treatment of HIV.

Attitude	2 <sup>nd</sup> year (45)students	3 <sup>rd</sup> year (34)students	4 <sup>th</sup> year (21)students
Positive	21 (46.6%)	20(58.8%)	17(80.95%)
negative	15(33.3%)	6(17.6%)	1(4.7%)
Neutral/passive	9(20%)	8(23.5%)	3(14.28%)



### RESULTS

1. HIV infection can spread by touching, kissing, sharing food and drinks. {false}

True / False

Choice	Total
True	74
false	26

2. Saliva can be a vehicle for transmission of HIV infection {false}

True / False

Choice	Total
True	72
False	28

3. HIV/AIDS patients can be identified by physical appearance

True / False

Choice	Total
True	52
false	48

4. Needle stick injury can transmit HIV virus. {true}

True / False

Choice	Total
true	86
false	14

5. Aerosols from hand piece can be a vehicle for transmission of HIV infection {true}

True / False

Choice	Total
True	80
false	20

6. ELISA/TRIDOT tests are screening tests for HIV infection. {true}

True / False

Choice	Total
True	88
false	12

7. Western blot test is a confirmative test for HIV infection {true – RIPA also}

True / False

Choice	Total
True	80
false	20

8. Medical and paramedical staff is more prone for HIV infection

True / False

CHOICE	Total
True	84
False	16

9. Treatment of HIV/AIDS patients requires special dental clinics.

True / False

Choice	total
true	82
false	18

10. HIV/AIDS patients can be suspected from oral manifestations. {true}

True / False

choice	total
True	86
False	14

11. A negative ELISA test rules out HIV infection

True / False

Choice	Total
True	72
False	28

12. Attitude

It is my moral responsibility to treat HIV/AIDS patients

Agree (positive)	78
Neutral	20
disagree	2

13. One can safely treat HIV/AIDS patients

Agree(positive)	58
Neutral	40
diagree	2

14. Risk of HIV contagion is high, hence special precautions have to be followed to treat HIV/AIDS patients

Agree(positive)	82
Neutral	12
disagree	4

15. Patients with HIV infection can lead a normal life

Agree(positive)	50
Neutral	34
disagree	16

16. Status of HIV infection of a patient should be disclosed to all the family members of the patient

Agree(positive)	46
Neutral	24
Disagree	30

17. All patients treated in dental clinic should be considered potentially infectious

Agree	64
Neutral	32
Disagree(positive)	4

18. If I know my friend or my spouse has HIV infection, I end the relationship

Agree	20
Neutral	38
Disagree(positive)	42

19. I will deliver emergency care to HIV/AIDS patients if need arises

Agree(positive)	60
Neutral	30
Disagree	10

20. If my colleague or assistant is HIV-infected I will stop working with him/her

Agree	32
Neutral	30
Disagree(positive)	38

Mean knowledge score

2 <sup>nd</sup> year students	3 <sup>rd</sup> year students	4 <sup>th</sup> year
6.02	7.82	10.47

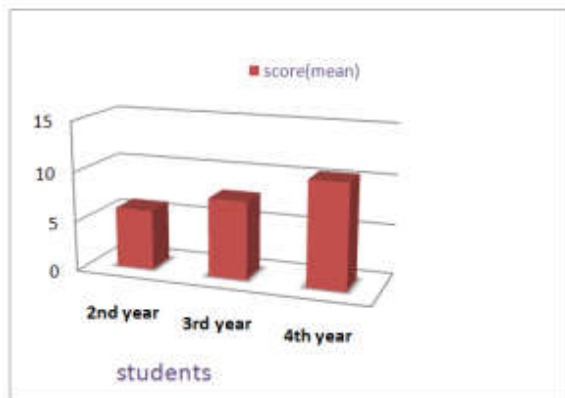
## DISCUSSION

The knowledge a student acquires in his/her academic field can make him/her a professional who is conscious of his/her attitudes and who has greater awareness of the risks involved within the workplace. During the graduation course, teachers should encourage them to seek the most up-to-date knowledge possible on the infectious diseases to which a dental surgeon may be exposed. Furthermore, students should be psychologically prepared for treating people with infectious diseases and be stimulated to seek self confidence in any kind of treatment, treating all patients with respect. As far as the

finding of this study is concerned, although the mean knowledge score is above 50% in majority of the population, the mean attitude of the subject population is that only 58% of the population exhibited positive attitude and about 42% of the study population revealed to have a negative or neutral attitude towards the treatment or providing oral health care services to the HIV infected individuals. The level of knowledge was associated significantly with the year of study [10]. What attracts particular attention in the findings of this study is the fact that students in semesters that have had little contact with the dental clinic, showed less apprehensive or fearful attitudes regarding the treatment of infected patients compared to students in more advanced semesters, of whom greater psychological preparation would be but differs from others. The majority would treat patients infected with AIDS, however almost all of the students agreed that there should be some kind of specialized course on theoretical and practical knowledge regarding care of HIV positive patients. It is the responsibility of the university to transmit this kind of knowledge during routine clinical procedures, without requiring a separate course to this end. The fear of the virus and the infection itself is revealed by the negative attitude of about 65% of the study population towards stating that all patients are considered potentially infectious. Further, various categories and 17 questions examining their attitudes toward the disease was employed.

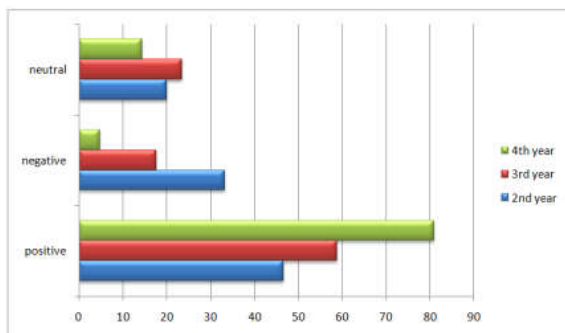
**Mean knowledge score**

2 <sup>nd</sup> year students	3 <sup>rd</sup> year students	4 <sup>th</sup> year
6.02	7.82	10.47



**Mean attitude score**

**Attitude percentage**



**Knowledge**

1. HIV infection can spread by touching, kissing, sharing food and drinks
2. Saliva can be a vehicle for transmission of HIV infection
3. HIV/AIDS patients can be identified by physical appearance
4. Needle stick injury can transmit HIV virus
5. Aerosols from hand piece can be a vehicle for transmission of HIV infection
6. ELISA/TRIDOT tests are screening tests for HIV infection
7. Western blot test is a confirmative test for HIV infection
8. Medical and paramedical staff is more prone for HIV infection
9. Treatment of HIV/AIDS patients requires special dental clinics
10. HIV/AIDS patients can be suspected from oral manifestations
11. A negative ELISA test rules out HIV infection.

**MATERIALS AND METHOD**

**Attitude**

1. Is my moral responsibility to treat HIV/AIDS patients
2. One can safely treat HIV/AIDS patients
3. Risk of HIV contagion is high, hence special precautions have to be followed to treat HIV/AIDS patients.
4. Patients with HIV infection can lead a normal life.
5. Status of HIV infection of a patient should be disclosed to all the family members of the patient
6. All patients treated in dental clinic should be considered potentially infectious
7. If I know my friend or my spouse has HIV infection, I end the relationship
8. I will deliver emergency care to HIV/AIDS patients if need arises
9. If my colleague or assistant is HIV-infected I will stop working with him/her