

HIV/AIDS – Related Knowledge and Attitudes Amongst Medical, Dental and Nursing Students of Saveetha University, Chennai

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Abstract

Aim: This study is aimed at assessing the HIV/AIDS - related knowledge and attitudes amongst medical, dental and nursing students of Saveetha University, Chennai. With increasing number of people having HIV/AIDS, students of medicine and health allied science should have sufficient knowledge about the transmission of the disease, and their attitude should meet professional expectations.

Materials and Method: A self-administered questionnaire was devised and a cross sectional study was conducted on 300 students in toto i.e. 100 medical students, 100 dental students and 100 nursing students. Data recorded was subjected to statistical analysis and appropriate conclusions were drawn.

Results: A small number of students in the medical fraternity had inadequate knowledge and misconceptions about HIV and harboured negative attitude towards HIV patients.

Conclusion: The findings from our study suggest that in order to instil a professional, ethical and empathetic approach towards AIDS patients, awareness and training programs are essential.

Keywords: Knowledge, attitude, HIV/AIDS patients, medical students, dental students, nursing students.

Introduction

AIDS is a serious medical condition caused by HIV. The patient's immune system becomes too weak to fight off infection, resulting in serious complications that ultimately prove fatal. The first case of HIV was recognized in the U.S. in 1981.¹ In 2009, India was estimated to have the third highest number of HIV infections in the world, with about 2.4 million people currently living with HIV/AIDS. However, according to United Nations 2011 AIDS report, there has been a 50% decline in the number of new HIV infections in the last 10 years in India.²

In 1988, the WHO has stated that all dentists should treat HIV patients.³ Despite these recommendations, ignorance of the risk of HIV transmission during dental procedures has led many dentists to refuse and/or become reluctant to treat these patients.⁴⁻⁶ This is particularly significant in developing countries like India where these patients do not receive professional treatment owing to financial barriers.⁷

Students of medicine and health allied sciences play an important role in the delivery of health care to HIV/AIDS individuals and are therefore of special interest and importance in this respect. With increasing number of people having HIV/AIDS, students of medicine and health allied science should have sufficient knowledge about the transmission of the disease, and their attitude should meet professional expectations. Thus a cross sectional study was conducted to assess HIV/AIDS – related knowledge and attitudes amongst these students.

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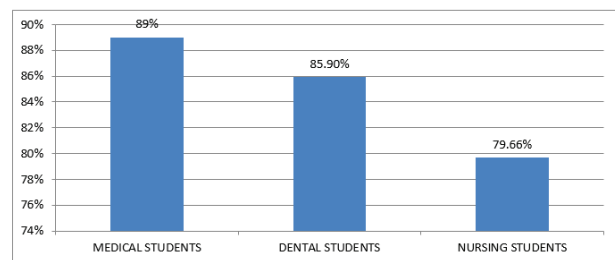
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Materials and Method

The cross sectional study was conducted in Saveetha University, Chennai during April 2015 after receiving approval from the Review Board of Saveetha Dental College. The study included a random convenience sample comprising of 150 participants. ie. 75 from the medical, dental and nursing sectors each. These students were either third year students, fourth year students or interns. Their knowledge about AIDS and attitude towards HIV patients was assessed by a structured, self-administered questionnaire. Knowledge based questions covered various aspects such as causative agent, pathogenicity, transmission, prevention and treatment of AIDS patients. (Table 1) Attitude based questions tested students' empathy, neutrality and indifference towards AIDS patients. Data was collected and analyzed.

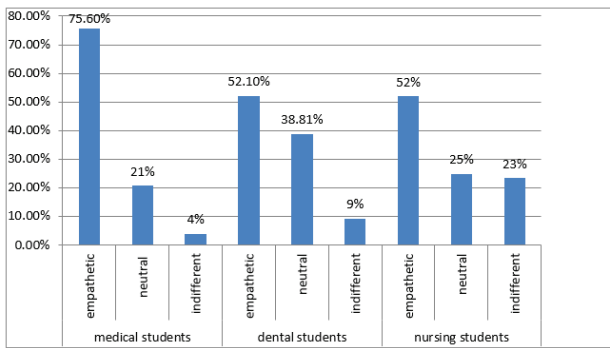
Results

- 97.3% of all the students were aware that AIDS stands for Acquired Immuno Deficiency syndrome and 96.5% knew that its causative agent is Human Immuno deficiency Virus.
- 90% of the students knew the difference between AIDS and HIV.
- 57.7% of them agreed that AIDS is less communicable than Hepatitis B.
- 43% of them knew that the virus is icosahedral in shape.
- 88.3% were aware that gp 140 and 41 are the transmembrane glycoproteins present in the envelope of the virus.
- 71% of the members knew that the virus binds to CD4 and chemokine receptors on the host cell.
- 46.7% were aware of the classification of HIV based on CD4+ cell counts i.e. .
- 54.8% of them agreed that there is no phase during which all the viruses are in the form of proviral DNA when the host cells remain uninfected.
- 77.3% of the study population were aware of the fact that HIV infected patients can remain asymptomatic for months or years.
- 97% of the study members agreed that sexual contact, blood transfusion, sharing needles/ syringes and mother to child are the modes of HIV transmission.
- 83.68% of the students knew that mosquito bites, saliva, sweat, tears, social contact (casual kissing, hugging, sharing utensils and clothes), toilet seats, coughing and sneezing are not responsible for HIV transmission.
- 94.5% of the study participants knew that ELISA and Western blot are the preliminary and confirmatory tests for AIDS.
- 79.3% of the people knew that one cannot protect themselves by being vaccinated against AIDS.
- 88.2% of the students agreed that abstinence, fidelity and condom usage can lower risk of AIDS
- 88.2% were aware that barrier technique includes wearing double gloves, surgical cap, protective eye wear and disposable gowns.
- 34.6% of the people agreed that heat sterilization does not kill HIV.
- 77.5% of the study participants knew that reverse transcriptase inhibitors and anti-viral drugs are the most widely available HIV medication.
- 75.8% of the study population were aware that there are specialized clinics for treatment of HIV patients.



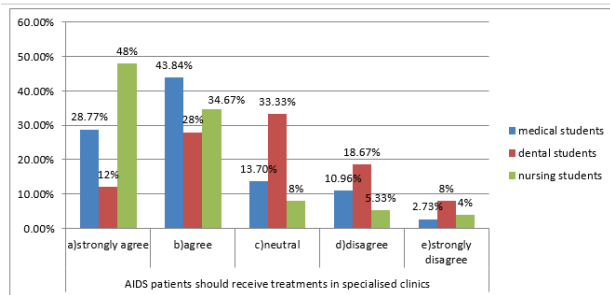
Graph 1: Over all knowledge levels.

- 84.85% of all the students gave the correct response to knowledge based questions. 89%, 85.8% and 79.7% of medical, dental and nursing students respectively gave the correct response to knowledge based questions.



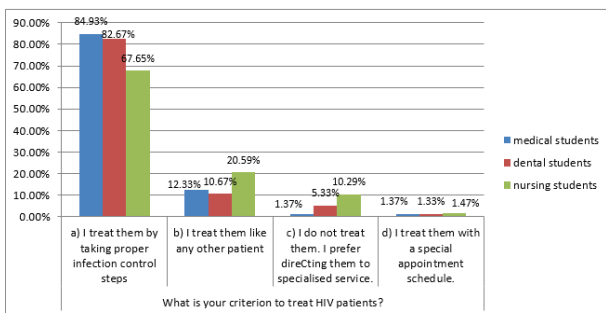
Graph 2: Over all kinds of attitude.

• 59.90 of all students showed empathetic attitudes. 75.6%, 52.10 and 52% of medical, dental and nursing students respectively showed empathy towards HIV patients. 21%, 38.81% and 25% of the same groups showed a neutral attitude. While the rest remained indifferent.



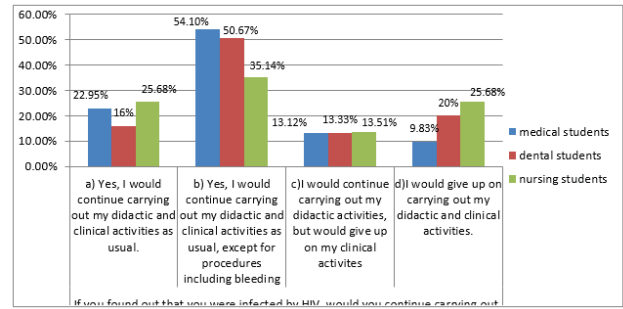
Graph 3: Student’s response to whether AIDS patients should receive treatments in specialized clinics.

• And 65% of the study participants felt that these patients require treatment in specialized clinics.



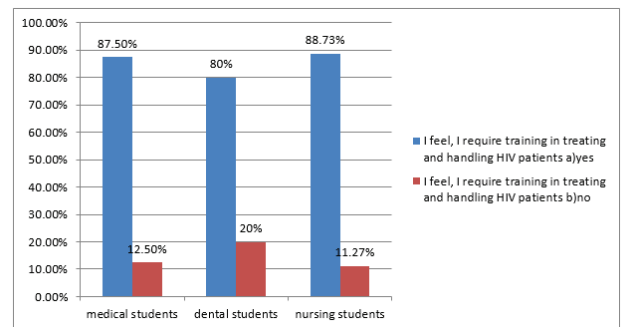
Graph 4: Students’ criterion to treat HIV patients.

• 78.4% of the entire group responded that they will treat AIDS patients with proper infection control steps.



Graph 5: Students’ response to whether they would carry out their health care duties if they were found to be infected with AIDS.

• 46.6% of the participants altogether claimed that they would continue carrying out their didactic and clinical activities as usual, except for procedures including bleeding, if they contract AIDS themselves.



Graph 6: Students who felt they required/ didn’t require training in handling AIDS patients.

• 85.4% of the total students felt that they require training in treating HIV patients.

Discussion

In our study majority of the participants were aware of the full form of AIDS, its causative agent, the difference between AIDS and HIV, the transmembrane glycoproteins on the virus, the host receptors, the latency period, modes that help in HIV transmission. They were also aware of the preliminary and confirmatory tests for AIDS. They agreed that abstinence, fidelity and condom usage can lower risk of contracting AIDS. And were cognizant of the barrier techniques that should be adopted by health professionals and the presence of specialized clinics for treatment of HIV patients. They also knew that reverse transcriptase inhibitors and anti-viral drugs are the most widely available medication and that there is no vaccination. Only a minority of our study participants were aware of the shape of the virus, the classification of AIDS based on CD4 count, and that

heat sterilization cannot kill the virus.

A commendable majority (84.5%) of all the students gave the correct response to knowledge based questions. Medical students seemed to have the most knowledge compared to dental and nursing students (graph 1). Although our results show satisfactory levels of knowledge, considerable number of students had misconceptions regarding the transmission of AIDS. Medical students were also the most empathetic, as with knowledge comes empathy (graph 2). Most of the students across all specialties felt that patients require treatment in specialized clinics (graph 3). They agreed that they would take proper infection control steps to treat them (graph 4). Majority of the people mentioned that if they contracted AIDS themselves, they would continue their professional activities but would give up on procedures involving bleeding (graph 5). Also, a large number of the participants felt the need to undergo training in treating AIDS patients (graph 6).

Various similar studies have been conducted worldwide, and wide differences in results have been obtained. According to studies conducted by Jain et al and Shan et al, in Udaipur and Bhopal respectively, over all knowledge levels were found to be satisfactory.^{8,9} Excellent knowledge levels of 78.8% and 82.1% were obtained in studies among Indian and Iranian dental students conducted by Ashish Aggarwal and Sadeghi respectively.¹⁰ According to Hidayathulla et al, overall knowledge and attitudes of dental students in Bangalore was moderately adequate to adequate.¹¹

According to Daneil M, lack of knowledge about transmission of HIV was observed among the healthcare professionals in private and government hospitals in India. His study had identified serious knowledge gaps among medical practitioners leading to refusal of treatment to persons living with HIV.¹² According to Abhimanyu et al, from Bhubaneswar and Anjum et al from Karachi low knowledge and attitude scores were found.^{13,14} In a study by V. D. Thenarasu among dental students, interns had more knowledge and awareness compared to final year students.¹⁵

According to McCartan, there are reports of reluctance by dentists to treat patients, including denial of treatment.¹⁶ A study on medical students conducted by Mohsin et al, has shown certain misconceptions regarding transmission of AIDS.¹⁷ According to Azodo CC willingness to treat AIDS patients among dental

students appeared to be related to their knowledge of the disease, and understanding the modes of its transmission.¹⁸

Although there is considerable research on AIDS, uncertainty towards HIV positive patients and refusal to treat them still persists along with the fear and possibility that an HIV positive professional might be prevented from practising his profession. Our participants have good knowledge about AIDS and also empathise HIV patients. Increased knowledge of issues concerning HIV has led to increased willingness to treat these patients.

Conclusion

A small number of students in the medical fraternity had inadequate knowledge and misconceptions about HIV and harboured negative attitude towards HIV patients. These findings suggest that awareness and training programs are essential in order to instil a professional, ethical and empathetic approach towards AIDS patients.

No Conflict of Interest

Ethical Clearance

Taken from Institutional Ethical Clearance Committee

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