

Assessment Of The Dental Students About Hiv/Aids And Its Precautions – A Survey Study In Jaipur.

Abstract

Context

The accidental transmission of HIV infection to health care professionals such as dental surgeons and dental students during occupational exposure, are the real threats today.

AIMS

The objective was to assess the awareness of dental students about HIV/AIDS and to identify the areas of confusion that might serve as an important aspect of educational intervention.

Settings & Design

This cross-sectional study was conducted amongst 300 BDS students. Information was collected on a pre-designed, pre-tested and self-administered questionnaire.

Statistical Analysis

The responses of 300 students' were taken into consideration for study. Data collected were entered in Microsoft Excel programme and analyzed using the SPSS software.

Results

83% respondents were totally aware about HIV/AIDS and for 48% of the participants, the source of information was newspaper/magazines and 27% had been guided by teachers/ parents. 94% dental students were willing to participate in spreading awareness for HIV/AIDS. 69% believed that being dentist they were not much at risk of contracting HIV being a healthcare professional

Conclusion

It is imperative for the health care policy makers to review and reorient the ongoing training programmes regarding HIV awareness in India. We should prepare dental students to face the challenges in future, their training should include not only the role they are required to play but also there should be continuous training programmes to sustain the effect so that it could enable them to address fear, discomfort and anxieties about HIV/AIDS.

Key Words

Dental Students, Health care Professional, HIV/AIDS, Transmission

Introduction

The AIDS epidemic is continuing to grow^[1], global estimates indicated that over 40 million people are infected^[2]. The fact that the number of HIV-infected patients under dental care is expected to increase^[3] highlights the importance of providing healthcare, part of which dental treatment, to all individuals indiscriminately^[4]. The reports indicated that about 90% of the HIV infections among healthcare workers occur in developing countries where occupational safety is a neglected issue^{[5],[6],[7]}. Every HIV positive patient is a potential candidate for disease transmission to the attending health care workers. So, the risk of accidental transmission of HIV in health care professionals, depend on their safe practices including universal precautions which in turn, depends on their awareness and knowledge regarding the epidemiology of the disease.

The accidental transmission of HIV

infection to health care workers during occupational exposure, are the real threats today^[8]. Many such cases have been documented by NACO and various other researchers.

Amongst the health care professionals, dental surgeons, dental students, dental hygienists, dental assistants and laboratory technicians are an important component of the health care delivery system since they are responsible for the oral health care of patients. During their surgical and operative procedures they come in close contact with blood and other body fluids of patients. There are chances of accidental needle prick injuries, ingestion of body fluids during dental treatment procedures. Due to frequent and prolonged contact, they are being identified as a potential risk group for the HIV/AIDS spread. To reduce the transmission, adequate knowledge about the disease and practice of safety measures are of great importance. Generating awareness regarding

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HIV/AIDS in this group is crucial for AIDS management and the prevention of HIV spread.

Data regarding the baseline knowledge of HIV/AIDS amongst dental service providers and impact of these training programmes are required to modify the contents of the programme further. The barriers hindering oral healthcare delivery to HIV/ AIDS patients include ignorance, lack of appropriate facilities and fear of contagion, stigma and discrimination^[9]. Keeping this in view, a cross-sectional study was carried out to assess the awareness of dental students about HIV/AIDS and to identify the areas of confusion that might serve as an important aspect of educational intervention.

Methodology

A cross-sectional study was conducted amongst the interns, final and third year BDS students of a city based Dental College & Hospital. Out of the total of

310 students, 300 BDS students whose questionnaires were completely filled, were included in the study while ten Performa were not included being incomplete. The purpose of the study was explained to all the participants. Information was collected on a pre-designed, pre-tested and self-administered questionnaire. They were informed that the whole exercise was confidential, anonymous, voluntary and purely for academic purpose. Questionnaires were distributed to all the students simultaneously during their regular clinical postings in the department of Oral Medicine & Radiology. Data collected were entered in Microsoft Excel programme and analyzed using the SPSS software.

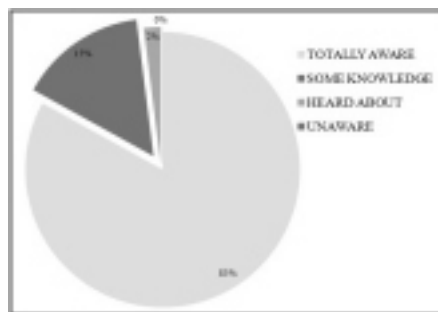
Results & Observations

It was found that all the respondents had been aware of HIV/AIDS. 83% of them opined that they were totally aware about HIV/AIDS whereas 15% had some knowledge about it (**Graph 1**). For 48 per cent of the students, the main source of information regarding HIV/AIDS was newspaper/magazines/poster followed by TV/Cinema/Radio (17%) and peer group (08%); as many as 27 per cent subjects had received their awareness through the guidance of teachers and parents (**Graph 2**).

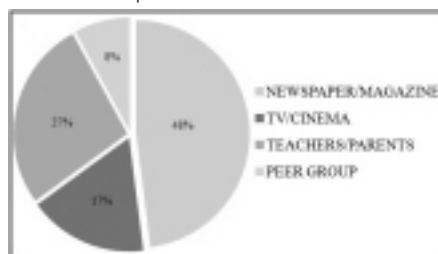
Of the 300 students, 294 (98%) claimed that they knew about modes of HIV transmission and myths associated with it. However 18% of the dental students believed that HIV/AIDS does not transmit through blood transfusion, unsterilized needles and unsafe sexual contact. The common misconceptions about HIV/AIDS among them were that HIV transmission can also occur through hugging, sharing of toilet seats, towels, utensils, shaking hands and mosquito-bites and kissing. A surprisingly high number of dental students (34%) associated with these myths and seemed to be influenced by local talk rather than their academia and knowledge (**Table 1**). It was also revealed that among the various types of sexual intercourse that can transmit HIV infection, 75 per cent thought that it transmits equally through anal and vaginal intercourse. Anal intercourse can lead to increased risk of transmission of disease was known to only 08 per cent of the participants (**Graph 3**).

Results given in **Table 2** show that 81 per cent of the students knew that blood

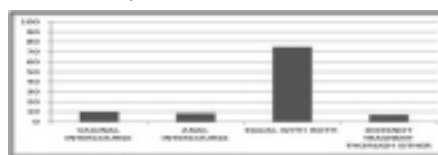
transfusion related infection can be reduced by receiving screened blood while 41 per cent had viewed that blood should not be received from any paid or professional blood donor. More than 70 per cent of them were ready to receive



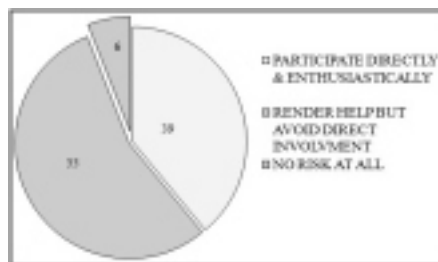
Graph 1: Level of HIV awareness



Graph 2: Source of HIV awareness



Graph 3: Modes of Sexual Transmission of HIV



Graph 4: On working with HIV patients and for AIDS awareness

Table 1: Awareness Levels About Hiv Modes Of Transmission

S. No.	Awareness Levels About Hiv Modes Of Transmission	Positive Awareness	Negative Awareness	Can't Say
1.	Awareness Of The Actual Modes Of Transmission (Blood Transfusion, Unsafe Sexual Contact, Vertical Transmission, Use Of Needles And Syringes)	80%	18%	02%
2.	Influenced By Misconceptions And Social Taboos (Sharing Towels, Glasses, Toilet Seat And Mosquito Bites Etc)	52%	34%	13%

Table 2: Opinion Regarding Safety Of Blood Transfusion Procedures

S.No.	Blood Transfusion Practice	Respondents (N = 300)					
		Safe		Not Safe		Don't Know	
		No.	%	No.	%	No.	%
1.	Donate Blood At Well Reputed Blood Banks	36	12	225	75	39	13
2.	Receive Blood From Paid/ Professional Donors	99	33	123	41	78	26
3.	Donating Blood At Reputed Blood Banks Is	243	81	33	11	24	08
4.	Received Blood Not Screened For Hiv/ Hepatitis/ Hsv/ Hcv Is	30	10	234	78	36	12
5.	Receiving Any Available Blood During Emergency Is	60	20	210	70	30	10

Table 3: Target Of HIV Awareness

S. No.	Criteria - Target Of Hiv Awareness	No.	%
1.	Economically And Socially Backward Classes	36	12
2.	Sex Workers And Occupationally Prone Subjects	153	51
3.	Youth	57	19
4.	Health Care Providers	54	18

blood/blood products available from anywhere in case of emergency and 81 per cent were assured that donating blood and blood products at reputed blood banks is safe.

It was opined from the dental students that who should be the target of HIV and AIDS awareness programme in India, it was aimed to find out whether the youth power and duty of health care providers was considered necessary for eradication of this disease. But in accordance with the common belief, even dental students (51%) believed that sex workers and occupationally prone subjects like truck drivers etc should be the target of AIDS awareness programme; only 19 per cent and 18 per cent were of the view that AIDS eradication and prevention can be achieved by awareness in youth and Health care providers (**Table 3**).

To assess how much is the willingness among dental students in participating in AIDS awareness and Eradication programme, students were questioned and it was revealed by the analysis (**Graph 4**) that 39 per cent subjects were willing to participate enthusiastically to join an AIDS awareness programme and work amongst HIV affected individuals; whereas the majority of subjects (55%) were ready to offer help but avoid direct involvement with HIV affected patients. Only 13 per cent subject considered counselling at Health Centres by health care professionals regarding HIV/AIDS

an important component of AIDS eradication programme and as many as 55 per cent wished to target villages for awareness camps.

HIV/AIDS has profoundly affected every aspect of the health sector, including the oral health care providers. Dental surgeons are prone to accidentally acquire HIV and other infections during work yet in the survey an alarmingly 69 per cent dental students believed that being dentists they were at no risk of acquiring HIV, 30 per cent were aware of the risk and the precautions to be taken. Only 58 per cent were aware about the significance and usage of PEP (Post Exposure Prophylaxis) regime.

Willingness to treat patients with HIV/AIDS appears to be related to the knowledge of the disease process, thus influencing health care workers' attitudes and behaviour towards management of such patient. In this survey it was observed that as many as 35 per cent dental students preferred development of specialized centres for the general and oral health management of patients affected by HIV/AIDS, yet a good 55 per cent believed in the concept of providing oral health care and requisite dental treatment in routine dental set ups/clinics using precautions.

Upon questioning that if they encounter that a patient is presenting with HIV +ve status during clinical history taking and examination, 77 per cent dental students said they would prefer to counsel the patient and refer him/her to some specialized centre, only 11 per cent were willing to give the requisite treatment with precautions.

Lastly they were asked to give their one line view point about HIV/AIDS and it was revealed that 24 percent students considered it to be an incurable and fatal disease, a good and promising number of future dentists believed that HIV/AIDS is an avoidable misfortune in the present times (42 %); yet still even after education in dental school and so many source of awareness 24 per cent dental students considered it a social stigma.

Discussion

HIV infection is not only a significant health problem but also one of the most important social issues of the twenty-first century. While the basic information about the disease like causative agent, modes of transmission, etc. were known to most of the participants, deficiencies in their knowledge and awareness in many

critical areas of the disease were noticed. These deficiencies in knowledge influence their behaviour thus, exposing them to the risk of transmission^[10]. As it can be seen from the present study that misconceptions regarding transmission of the disease are high which can further lead to discrimination in patient care or apprehensions and stress amongst the health care providers while dealing with such patients. An awareness study^[11] on HIV/AIDS on nursing students of Delhi also revealed a high level of popular misconceptions.

Similar misconceptions have also been reported among medical school faculty and students^[12]. A sound basis of knowledge about HIV infection is essential to allow students to develop as dentists who undertake appropriate measures during clinical practice^[11].

In the present study, it was revealed that apart from routine sources like electronic and print media, TV/Cinema/Radio a good number of students received AIDS awareness from Teachers and Parents. This is a good indication of dissolving taboos in our societal structure and also augments the fact that the knowledge received is standard and reliable. It is very encouraging to see that 94 per cent of the students are eager to participate in campaigns against HIV/AIDS directly or indirectly which indicates that they are ready to equip themselves with the correct knowledge regarding the disease. Almost 60 % were aware about the PEP (Post Exposure Prophylaxis) regime; it reflects that they are motivated to practice universal precautions to protect themselves as well as their patients from the dreadful disease. In study carried out by Al Naimi R J that 90% of the students were using all three type of barrier technique^[13]. Dental health staff are exposed to infectious agents during work, especially when proper barrier precautions are not followed^{[14],[15],[16]}.

A good number (55%) of future dentists were willing to provide dental treatment to HIV affected individuals in routine dental set up using universal precautions. In a study conducted by Venu Shan et al^[17] among dental students 38% were not aware of Universal basic precautions and not practising these puts dental professionals at a higher risk of HIV exposure.

It was found that only 18% expressed the need for specialized programmes for health care providers including dentists to help in AIDS awareness and

eradication. The level of awareness presently observed can be categorized as satisfactory, yet optimal results can be achieved by specific and detailed plan of action available to health care providers for HIV/AIDS eradication in a country as vast as India with so many cultural divides and prevalent social taboos.

To prepare dental students to face the challenges in future, their training should include not only the role they are required to play but also there should be continuous training programmes to sustain the effect so that it could enable them to address fear, discomfort and anxieties about HIV/AIDS.

Conclusion

Based on review of the reported literatures from our country on this topic till now and the outcomes of the present study, it is clear that our efforts in the last two decades in spreading the knowledge about the disease have met with some limited success.

The fact that increasing number of cases of HIV/AIDS are being reported from various parts of the world coupled with increased incidences and prevalence of the disease in the bridge population, it is imperative for the health care policy makers to review and reorient the ongoing training programmes. The dental health care provider must be knowledgeable about the most common diseases encountered during dental care, and must responsibly provide care to patients without infecting patients or getting infected^[18]. This study points towards the need for a specialised training programme for the pre-clinical dental and medical students. This would enable them to be knowledgeable about HIV/AIDS and its precautions prior to clinical exposure. The structure of this programme should be such that it improves their practical approach towards handling HIV/AIDS patients as future health care providers. It should serve as an adjunct to already taught literature in academic syllabus.

Thus while on one hand, serious deficit in knowledge in specific areas need to be addressed, tremendous effort has to be put in to devise strategies to convert the theoretical knowledge into 'safe practices'.

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