

# Are you willing to Treat Patients with HIV/AIDS? - An Anonymous Survey among Staff and Students of Dental Institution

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## Abstract

**Background:** India is one of the largest and most populated country in the world, with over one billion inhabitants. Of this number, it is estimated that around 23.9 lakh people are currently suffering with HIV. People living with HIV/AIDS (PLWHA) require increasingly competent and compassionate health care, including oral health care.

**Objectives:** The present study was conducted with the objective of evaluating the response of dental health care professionals (staff and students) in willingness to provide treatment to HIV/AIDS patients and whether the training and education provided to them is sufficient to handle such patients, or whether there is necessity for advanced curriculum to be implemented.

**Materials and Methods:** An anonymous survey with the permission from ethical committee of dental institution was conducted with the use self-administered questionnaire eliciting information on self-rated HIV/AIDS knowledge, attitudes, infection control practices, occupational risk perception and willingness to treat HIV/AIDS patients.

**Results:** An increase in level of knowledge was observed with the increase in year of study from first BDS to post graduation and MDS staff. It was observed that interns and post graduate students were willing to treat patients with HIV/AIDS. Staff of the institution showed greater concern to undergo training to provide efficient treatment to patients with HIV/AIDS.

**Conclusion:** It was concluded that there was a positive attitude and willingness of staff and students to treat a patient suffering with HIV/AIDS. Also, there was willingness and interest of the staff and students of the dental institution to participate in training programmes to provide better and more efficient treatment to HIV/AIDS patients.

*Key Words: Knowledge, Attitude, AIDS, HIV, Dental professionals*

## Introduction

HIV (Human Immuno Deficiency Virus) the etiological agent for AIDS (acquired immune deficiency syndrome) 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]. India, China, and the countries of the former Soviet Union are experiencing significant increases in the reported number of people living with HIV (PLHIV) each year [1]. Often referred to as the 'second wave' countries of the HIV pandemic, these regions share sizable populations, represent high levels of cultural diversity, and have low levels of knowledge concerning HIV prevention and transmission [1].

PLWHA are subject to a spectrum of potentially painful and health-compromising oral conditions that are associated with HIV disease and/or HIV treatment [2]. Recent international studies indicate that oral lesions (e.g., oral candidiasis and Kaposi's sarcoma) occur in as many as 50 to 70% of all HIV/AIDS cases [3]. These conditions, which may be preventable and/or treatable with regular dental care, often persist and lead to discomfort, dysfunction, and disability that, if left untreated, can significantly impede quality of life [1]. Despite the importance of oral health care for PLWHA, many of these individuals fail to receive adequate oral health care treatment due to the influence of various barriers [4].

Therapeutic procedures in dentistry frequently involve blood and saliva that may contain a variety of blood borne

pathogens and microorganisms, such as HIV [1]. The possibility of HIV transmission in the oral health care setting is considered to be very low [5]. However, most lesions of HIV infection present orally during the first stages of the disease, so dentists fall into the high-risk category for cross-contamination [6]. Since 1988, the World Health Organization (WHO) has stated that all dentists must treat HIV-positive patients [7]. It is not only unethical but also unlawful for a dentist or dental student to refuse treatment to an HIV-positive patient [8]. 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 HIV/AIDS patients [9,10].

The purpose of this study was to evaluate the knowledge, attitudes and willingness of staff and students of a dental institution to treat patients with HIV/AIDS in Andhra Pradesh a state of the India.

## Materials and Methods

An anonymous survey was conducted in a dental college, Andhra Pradesh, India. A total of 390 participants were given a self-administered questionnaire for data collection which comprised of 26 close ended questions. The questionnaire elicited information on self-rated HIV/AIDS knowledge, Attitudes, Infection control practices, occupational risk perception and willingness to treat HIV/AIDS patients. Participation was voluntary and informed consent obtained

with the approval from ethical committee of institution prior to onset of research. Data was subjected to statistical analyses and used chi-square test of significance.

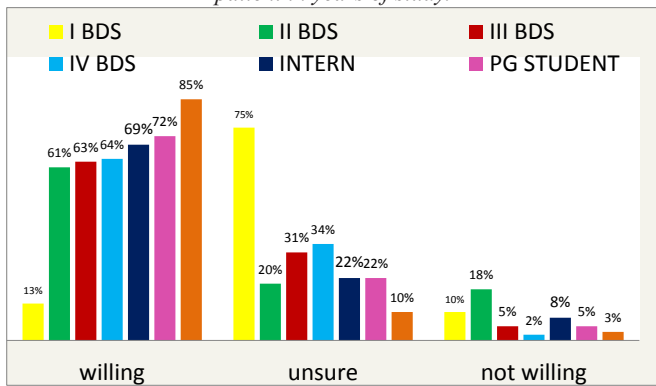
**Results**

Total of 390 (265 females and 125 males) participants including staff and students participated voluntarily and an anonymous survey was designed to avoid the influence on responses. An increase in level of knowledge was observed with the increase in year of study (Figure 1). Interns and post graduate students strongly agreed that patients with HIV/AIDS should be treated, which showed a positive attitude towards this patients (Figure 2). It was observed that overall good infection control practices were followed by all the participants who were in accordance with the WHO guideline of universal precautions and students of third and final year BDS showed improvised infection control procedures (Figure 3). Interns and post graduate students expressed higher percentage representing 82.5% willingness to treat patients with HIV/AIDS (Figure 4). Staff of the institution showed greater concern to undergo training and upgrade them to provide efficient treatment to patients with HIV/AIDS (Figure 5).

**Discussion**

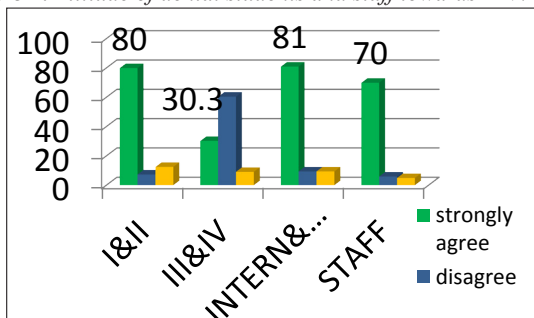
The risk of transmission of HIV in the dental care setting has been reported to be low; however, this does not indicate a zero risk as dentists can be accidentally exposed to the virus and other blood-borne pathogens in the course of treating patients [11]. HIV transmission risk for health care professionals after percutaneous exposure to HIV-contaminated blood was

**Figure 1.** Association between willingness to treat HIV/AIDS patient in years of study.



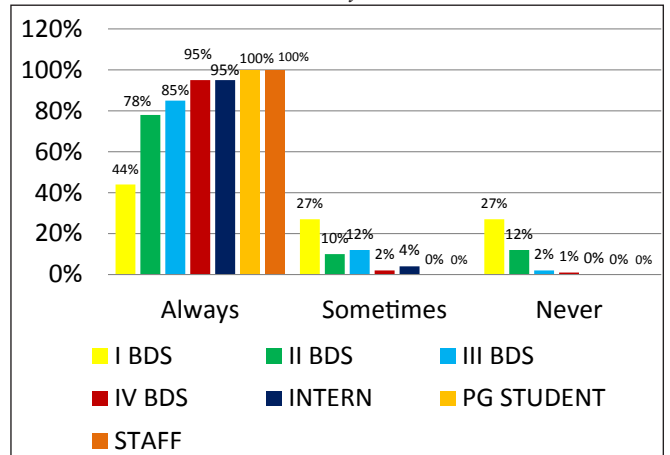
The graph demonstrates an increased willingness to treat HIV/AIDS with an increase in levels of education.

**Figure 2.** Attitude of dental students and staff towards HIV/AIDS.



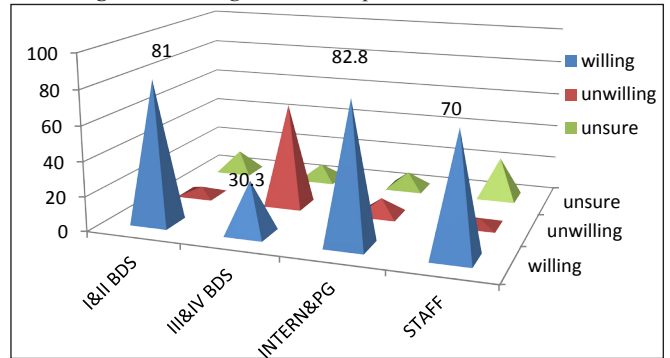
Graph Showing the varying levels of attitude among dental professionals when willingness to work with HIV positive.

**Figure 3.** Association between Infection Control Levels in Years of Study.



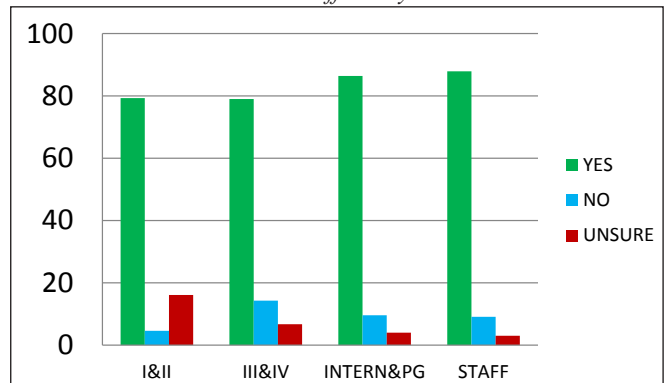
Overall good infection control practices were followed by the participants.

**Figure 4.** Willingness to treat patients with HIV/AIDS.



Interns and post graduate students expressed higher percentage of willingness to treat patients with HIV/AIDS.

**Figure 5.** Willingness to undergo training to treat patients with HIV/AIDS efficiently.



Staff of the institution showed greater concern to undergo training and upgrade themselves to provide efficient treatment to patients with HIV/AIDS.

estimated to be between 0.2% and 0.5% following exposure to mucosa to be approximately 0.1% [12]. In contrast, for HBV virus, the transmission risk after accidental exposure is between 6-30%. Previous surveys have shown that dentist are reluctant to treat persons infected with HIV, however they are much more willing to treat patients infected with hepatitis B Virus (HBV), in spite of annual cumulative risk of infection from routine treatment of patients whose seropositivity is undisclosed is 57 times greater from HBV than from HIV, and that the risk of dying from HBV infection is 1.7 times

greater than risk of HIV infection for which mortality is almost certain [12].

As the number of people with HIV/AIDS increases, the need of these individuals for medical care including dental care will increase [13]. So, dental practitioners will be required to enhance their knowledge of the disease and its oral manifestations [14]. In our study knowledge about HIV/AIDS patients was fairly good with  $p$  value  $< 0.001$  and showed an increase in level of knowledge corresponding with the increase in year of study, but this knowledge was not significantly associated with the willingness to treat HIV/AIDS patients. If dental health care workers are not confident of their knowledge about HIV/AIDS patient management, they would not be able to properly manage these patients. A lack of confidence in their own ability to manage HIV/AIDS patients could have amplified their perceived risk of being infected with HIV as well [15].

Among the participants, Interns and post graduate students strongly agree that patients with HIV/AIDS should be treated in dental office which showed a positive attitude towards these patients. Attitude factors significantly associated with the willingness to treat these patients were the following: Ability to treat infected patients safely, feeling moral responsibility, and believing that HIV/AIDS patients can live with others [15]. Interns and post graduate students expressed higher percentage, representing 82.5% willingness to treat patients with HIV/AIDS (Figure 4). In this study, the general willingness to treat HIV/AIDS patients was comparable to results from the study of Seacat and Inglehart (81.1%) and considerably higher from other studies Hu et al. (51% vs. 49%, respectively), Kuthy et al. (60%) [16-18].

Most respondents (79%) in our study had had no previous professional contact with HIV/AIDS patients. This factor among dental students must be disconcerting to dental educators because of increasing rates of HIV infection in the world. Most students thought that each patient should be considered potentially infectious. This feeling may be warranted since some HIV/AIDS patients abstain from declaring their illness out of fear of being denied dental care [15].

Based on these considerations, infection control precautions must be strictly followed with every patient. Thus overall improvement in infection control practices were observed among the participants of the study. Universal precautions including, taking a medical history for all patients and updating it periodically at subsequent visits, it is important that patients' HIV status is specifically asked. If dentists can ask patients about their history of other debilitating diseases, then they should ask about HIV status. This practice will enable the dentist to examine the patients more closely for oral manifestations and this will also ensure prompt treatment. Routine use of disposable gloves has been recommended for all patient contacts. Gloves ideally should be removed after seeing a patient and the hands washed thoroughly before re-gloving to see a new patient. The findings in this study are similar to Sofola's, where 92.5% claimed that they always

wear gloves [19].

In our study, 48% of participants agreed that they were not obligated to treat HIV/AIDS patients, 36% said that these patients should be treated in a separate ward. Current guidelines are that dentists must not refuse to treat a patient solely on the grounds of HIV infection and they cannot legally refer these patients to specialty clinics for routine dental care [8,20]. Various reasons for referring the patients include lack of ethical responsibility, fear of staff members, concerns related to uncertainty regarding safety regulations, cost of infection control procedures, lack of knowledge regarding oral lesions associated with HIV, and loss of normal patients due to treating HIV-positive patients [21,22].

Overestimation of the transmission risk of HIV seemed to be the most important reason for fear in providing dental care to HIV/AIDS patients [5]. Fear in an Individual may overpower their intellectual and practical ability to cope with the treatment and management of such patients [23]. So, continuous up-gradation of knowledge of current management would empower a dental health care worker to overcome these hurdles. When asked about undergoing training to treat patients with HIV/AIDS staff of the institution (87.9%) showed greater concern to undergo training to upgrade them to provide efficient treatment to patients with HIV/AIDS (Figure 5). There are also structural or institutional factors in health care settings, hospitals, and clinics that may encourage or discourage HIV-related stigma [24]. These factors may include policies and standard operational procedures. There has been a lack of research on institutional or structural factors associated with HIV stigma, which is important to inform effective interventions [25].

A potential limitation of our study is its cross-sectional design. Participants for this study were recruited at one time point and from courses within the dental school curriculum. Though other published studies on this topic have been limited to single-school recruitment, this recruitment strategy may limit the generalization of findings.

## Conclusion

Our study concluded a positive attitude and willingness of dental professionals, staff and students of a dental institution in treating an HIV infected person and in attending training programmes for the same. Thus an institution based study of this kind would be beneficial to the dental health care workers in understanding and upgrading themselves with research in the field. Various studies regarding the willingness to treat HIV/AIDS patients have been published previously with very few studies from India, which is one of the second wave countries. Although there is considerable research on AIDS, uncertainty towards HIV-positive patients and refusal to treat these patients still persists along with the fear and possibility that an HIV positive patient might be preventing a dental professional from practicing dentistry.

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