

# A SURVEY ON AWARENESS AMONG DENTISTS TREATING HIV AFFECTED PATIENTS

## **ABSTRACT:**

### **Aim:**

To study the awareness among Dentists treating HIV patients.

### **Introduction:**

Healthcare workers including physicians, dentists, nurses and laboratory workers are considered to be among the groups at the risk of blood-borne pathogen transmission. Dental treatment procedures frequently involve exposure to blood and saliva that may be contaminated with HIV. Dental care of HIV-positive individuals plays a vital role in improving their nutritional intake, medication tolerance and effectiveness, treatment success rate, and quality of life. The main Motive of the present study was to assess the knowledge, attitude and practice towards HIV patients among dentists.

### **Materials and Method:**

A descriptive cross-sectional study survey was conducted among 101 dentists practising in and around the area. It was done as an online survey. The data was collected using pre-tested self administered 11 item questionnaire and was statistically analysed using SPSS software version-23

### **Results:**

The results show that the majority of the subjects in the study population were males(55%) and remaining were females(44%). There were no significant differences between males and females in the knowledge and attitude scores.

### **Conclusion:**

The results of the survey demonstrated a satisfactory level of knowledge and attitude of dentists about HIV/AIDS infections but some general population suggesting that higher knowledge level of dentists plays a very important role in forming the attitude and practices regarding patients with HIV/AIDS.

**Keywords:** Attitude, Awareness, Dentists, HIV patients, Knowledge.

## **INTRODUCTION:**

Infections associated with The Human Immunodeficiency Virus Type 1 (HIV-1) and the resultant Acquired Immune Deficiency Syndrome (AIDS) is a major public health challenge in modern world(1). Since when it was first recognised in 1981, HIV/AIDS infection has become a major health concern worldwide(2)(3). In 2015 there were 2.1 million new infected HIV infections worldwide, adding up to a total of 36.7 million people surviving with HIV in the world(1,4). According to HIV estimations 2015 report in India, the total number of people living with HIV is estimated at 21.17 lakhs, among which children (<5 years) accounting for 6.54% and 40.5% of infections were among females (5). The human immunodeficiency virus is caused by the same virus that causes AIDS(6)(7)

HIV first invades the immune system by destroying CD4 positive (CD4+) T cells. The acquired immunodeficiency syndrome (AIDS) is the last stage of HIV infection(8). A person who is infected with HIV is also diagnosed with AIDS when he or she has one or more infections, such as pneumonia or tuberculosis(9)(10). Along with it HIV also results in defective granuloma formation and maintenance, reduced chemotaxis, impaired antigen processing and presentation and generalized loss of CD4+ T cells (11)(12).

## **MATERIALS AND METHODS:**

A descriptive cross-sectional study was done to analyse knowledge, attitude and practice among dentists. Approval was obtained from the institutional review board to conduct an online survey. The survey was done among 101 dentists. The self administered questionnaire often closed and open ended questions were prepared and distributed among dentists through online-based survey forms "Google forms". The questionnaire contained questions on demographic details also. A self administered questionnaire was prepared. The method of sampling that is done is simple random sampling. The responses were collected, tabulated in the excel sheet and analysed. Delete enter in SPSS software version 23, under results were represented in bar graph. chi-square test was used to analyse and compare their awareness levels of dentists

## QUESTIONNAIRE :

1) As a dentist will you treat patients who are HIV positive?

A)Yes

B)No

2)Can HIV spread through dental treatments?

A)High

B)Medium

C)Low

3) Do you have knowledge regarding oral manifestations associated with HIV?

A)Yes

B)no

4) As the dentist, will you be placed at a personal risk when you treat an HIV patient?

A)Yes

B)No

5) Will you take precautionary methods before treating HIV patients?

A)Always

B)sometimes

C)rarely

D)never

6) As a dentist would it be difficult to deal with staff fears about patients with HIV?

A)always

B)sometimes

C)rarely

D)never

7)How conscious are you when treating HIV patients?

A)highly conscious

B)conscious

C)least bothered

8) How will you manage dental instruments after treating HIV patients?

A)through sterilising solutions

B)autoclave

C)washing with soap solution

9)What are the immediate measures you will take?

A)consult with doctor

B)initial screening through serological analysis

10)Are you aware of antiretroviral drugs for hiv?

A)yes

B)no

11) Did this survey help you?

A)yes

B)no

UNDER PEER REVIEW

## RESULTS:

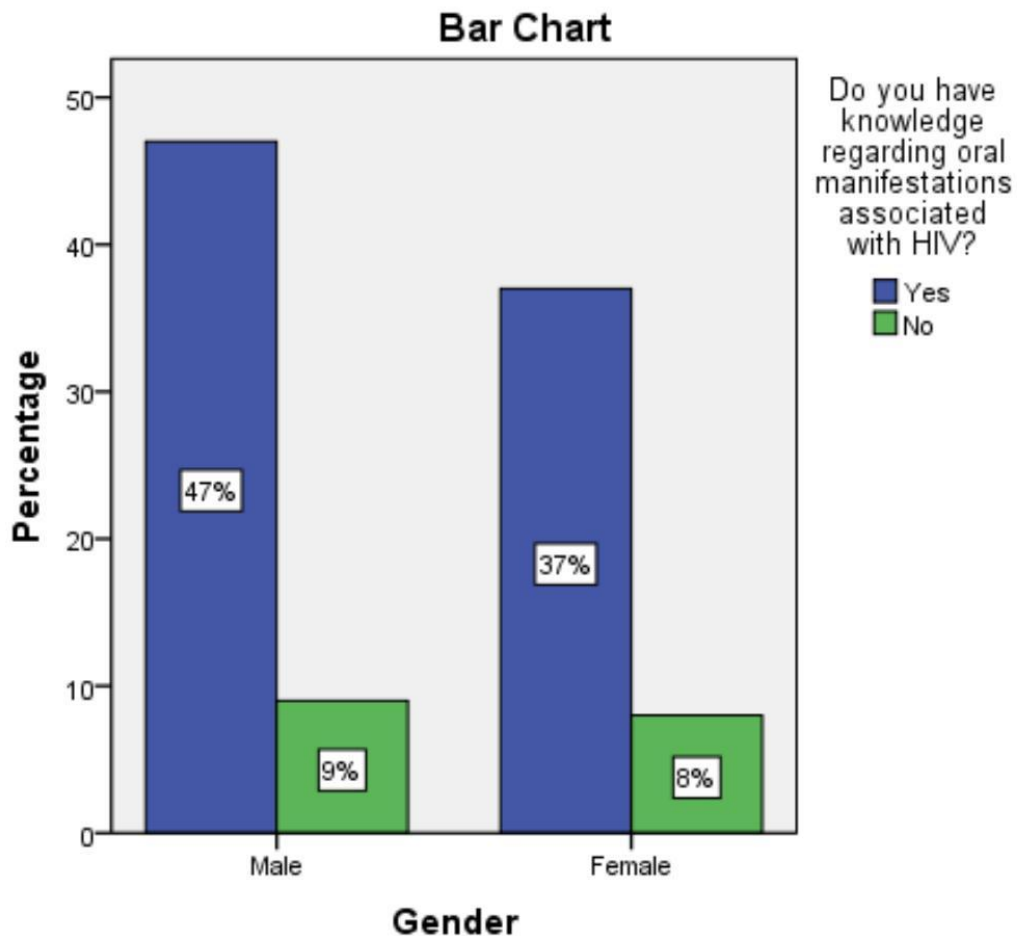


Figure 1: Bar graph depicts the association between gender and the knowledge regarding oral manifestations associated with HIV. X axis represents the gender and Y axis represents the percentage. Blue colour represents yes and green colour represents no. Majority of dentists answered that they have knowledge on oral manifestations associated with HIV. The difference is statistically insignificant (chi square test; p value = 0.820- insignificant).

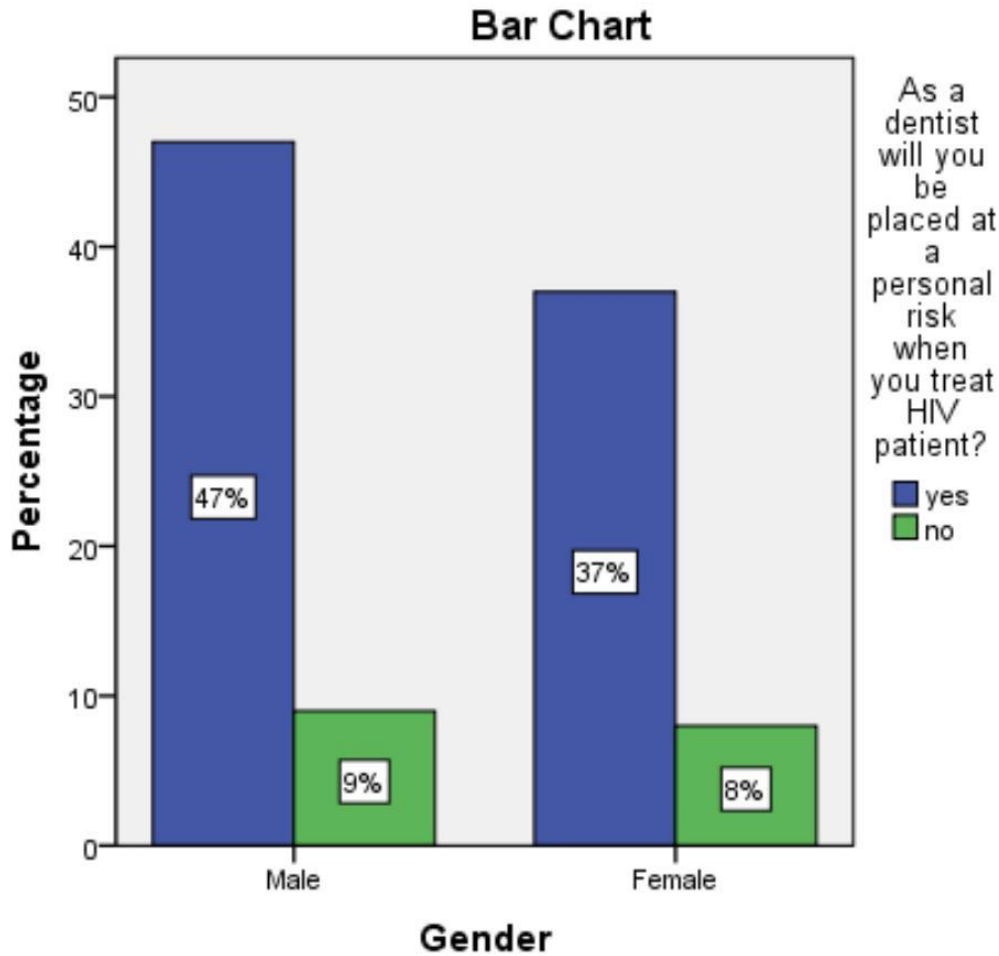


Figure 2: Bar graph depicts the association between gender and the response for the question whether dentists will be placed at a personal risk treating HIV patients. X axis represents the gender and Y axis represents the percentage. Blue colour represents yes and green colour represents no. Majority of dentists answered that they will be placed under a personal risk treating HIV patients which will have a major impact on their life. The difference is statistically insignificant (chi square test; p value = 0.820- insignificant).

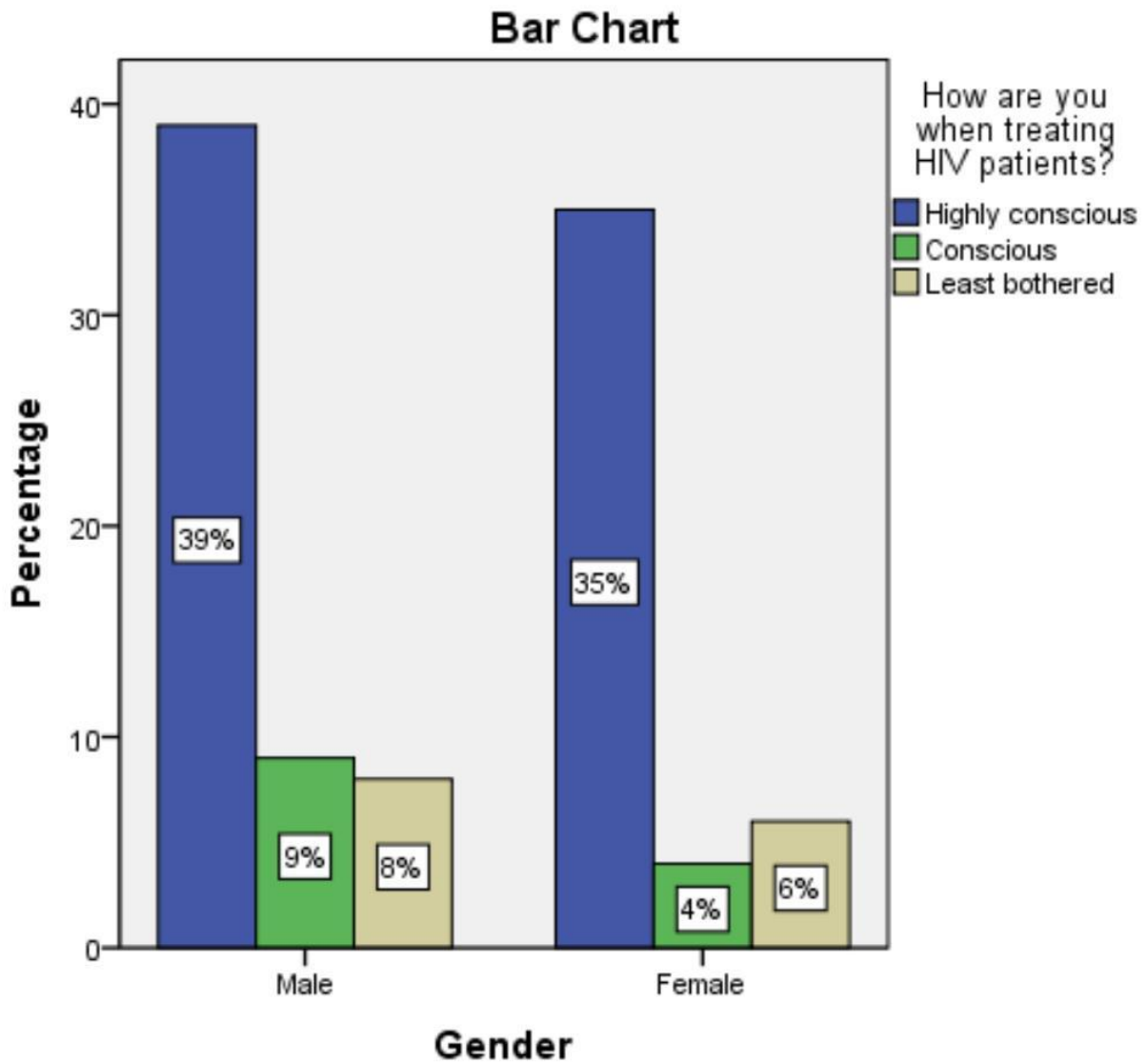


Figure 3 : Bar graph depicts the association between gender and the behaviour while treating HIV patients. X axis represents the gender and Y axis represents the percentage. Blue colour represents Highly conscious ,Green colour represents conscious and beige colour represents least bothered . Majority of dentists answered that they are highly conscious while treating HIV patients.The difference is statistically insignificant (chi square test; p value = 0.537-insignificant).

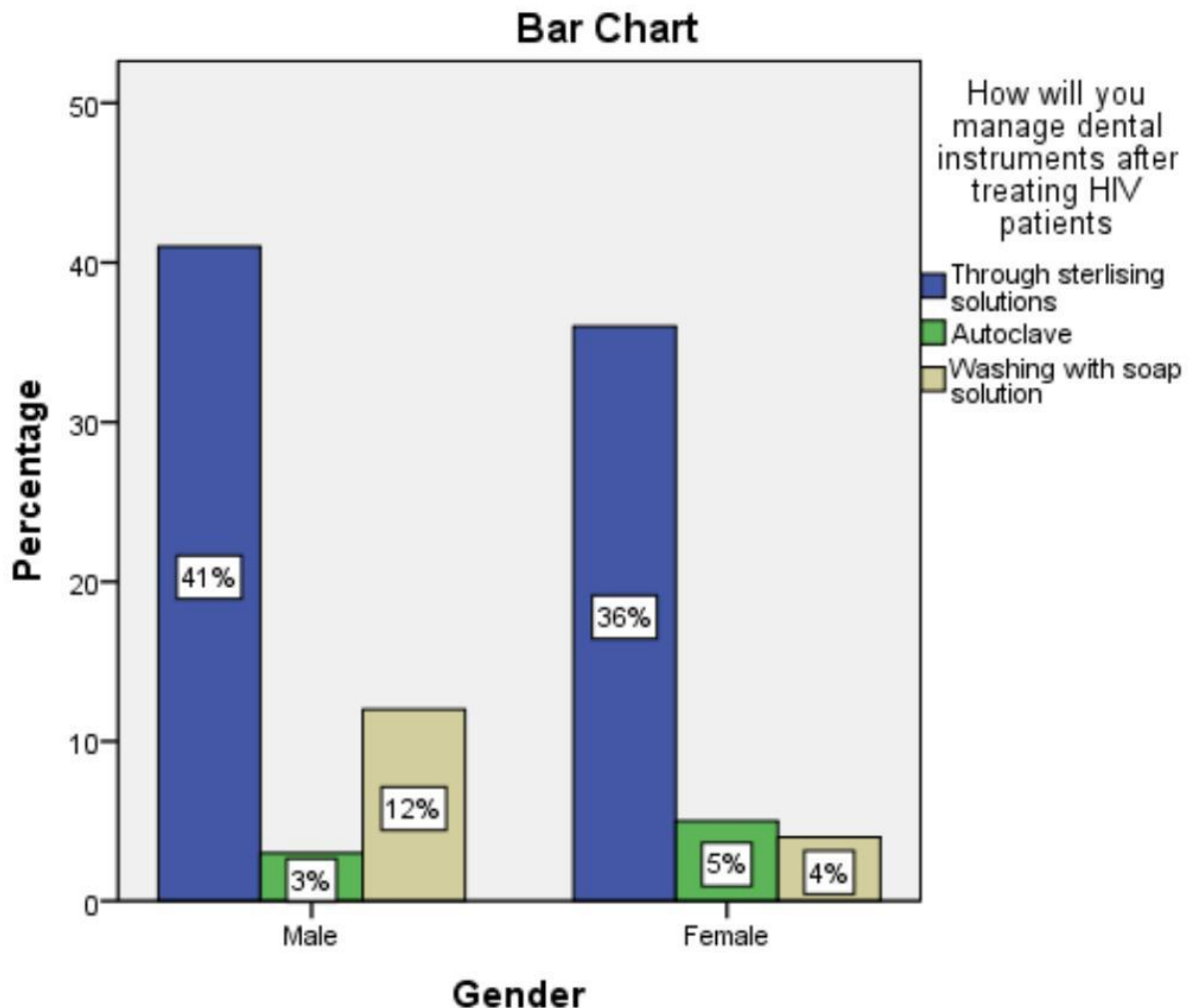


Figure 4: Bar graph depicts the association between gender and how they will cleanse the Dental instrument after treating HIV patients. X axis represents the gender and Y axis represents the percentage. Blue colour indicates they will clean through sterilising solutions, Green colour through autoclave and beige colour by washing with soap solution. Majority of dentists answered that they are highly conscious while treating HIV patients. The difference is statistically significant (chi square test; p value = 0.160- significant).

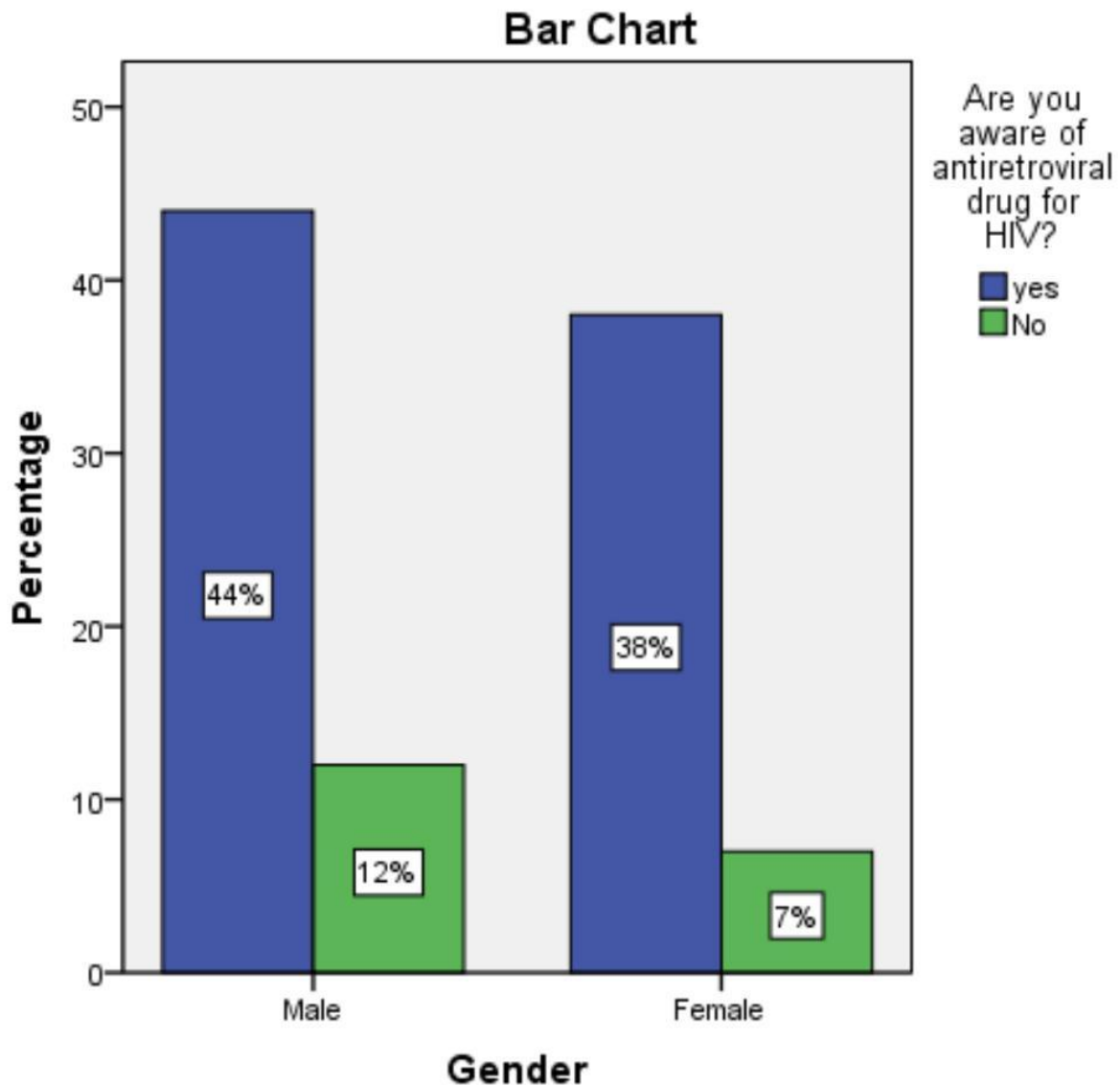


Figure 5: Bar graph depicts the association between gender and the knowledge of antiretroviral drugs. X axis represents the gender and Y axis represents the percentage. Blue colour represents yes and green colour represents no. Majority of dentists answered that they have knowledge on antiretroviral drugs to treat HIV. The difference is statistically significant (chi square test; p value = 0.453- significant).

## DISCUSSION:

During any kind of treatment in various aspects of dentistry it is important to know the patient's history, their habits, etc (13). In the present study, dentists practising in urban areas showed significant increase in positive attitude and practice(14). Further studies can be done to assess the effect of continuing dental education programmes/health education related to HIV on the attitude, knowledge and practice among dentists(15).

Further, the present study observed that statistical significance was found to exist between willingness to treat HIV patients and age groups respondents younger than 30 were likely to treat HIV infected patients, this may be because of the fact that they had received more formal training related to HIV than other dentists(16). There is a significant difference between males and females in awareness and knowledge with females showing an increase in positive attitude and knowledge towards HIV than males(17)(18).

Dental treatment most of the time includes direct contact with the patients' blood and saliva, because of that dentists and dental students can also be exposed to pathogenic viruses like human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV)(19). Even though HIV and viral hepatitis have different epidemiological characteristics, they can all be transmitted to the members of the dental clinics by professional exposure, most often by the needlestick injury (20)(19,21).

Even though the risk of transmission of HIV in the dental setting is less, the chance of transmission cannot be neglected(22). Oral health care environment is helpful in early detection of HIV/AIDS as most lesions are present orally in the first stage of infection (23)(24). With improved medication tolerance/effectiveness, treatment success rate by giving good oral care to patients HIV positive (25)(26)

Similar to the present study (Figure 1-5), reports show that nearly 90% of the HIV infections are from developing countries and in the past two decades all over the world, many dentists do not treat AIDS patients (27). Unwillingness to treat HIV patients by dentists is related to inadequate knowledge of how the disease is being processed, transmitted, diagnosed and treatment of HIV infected patients (28). Dental faculties should act as role models for dental students regarding

treatments (29). Thus, the current study was conducted on dentists regarding principles of infection control on HIV patients.

#### **LIMITATIONS:**

This study was done online due to time constraints, since the study was a cross sectional one limited to a smaller group of dentists, it does not represent the entire population.

#### **FUTURE SCOPE:**

This study was done on a small scale population, in future such study should be done on a large scale population, the results may be more accurate and there may be new findings.

#### **CONCLUSION:**

In the present study it was found that there were discrimination by dentist against HIV infected persons due to fear of transmission of the disease. For that it is very important to have a separate protocol for treating HIV patients and it must be educated as well. Furthermore the awareness is needed for the dentists who treat the patients having HIV by ensuring their safety and precautionary measures for the safest treatment. Thus the present study concluded that prior knowledge of precautionary measures must be necessary for dental practitioners.

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