

Public Perception of Cross Infection Control in Dentistry in Karachi

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Abstract

The purpose of this study was to evaluate and analyze the public's perception of cross infection control among the patients seen at the dental outpatient department of Altamash institute Of Dental Medicine, Karachi. It was carried out from mid-December 2019 to mid-February 2020. A description based cross-sectional survey was carried out on 160 patients. Patients were asked their name, age, gender and education were recorded in the questionnaire. It was further categorized to evaluate the knowledge, awareness, practices and behaviour pattern associated with cross infection control. Among all patients (58) were female and (102) were male. Study showed that (63%) people do not avoid dental visits or delay them due to the perception of cross infection while only (37%) people avoid dental visits due to cross infection.

Keywords: Infection Control; Public Perception; Dental Practice; Dentist

Introduction

The dental clinic is an environment where disease transmission occurs easily. Prevention of cross infection in the dental clinic is therefore a crucial aspect of dental practice and dental practitioners must adopt certain basic routines while practicing [1]. The nature of dentistry is such that both patients and healthcare professionals may be exposed to pathogens through contact with blood, oral and respiratory secretions [2]. Patients visiting dental clinics for their dental and oral health care may be healthy or suffering from various infectious diseases. Many times, the patients are not aware of their health status because of long incubation periods of infectious carriers of infectious disease that cannot be easily detected clinically. Even many infected microbes and post infection window period during which antibodies cannot be detected. These patients may spread cross-infection among dental health care personnel and even to other patients in dental clinics [3]. Wearing of gloves by dental personnel has been advised as an essential element of cross infection control in dental surgery. Hands are considered to be a major source of infection and potentially infected blood may be retained beneath the finger nails [4]. Healthcare workers can be source of hospital-acquired infections to patients, either as vectors themselves or by disseminating infections through fomites such as white coats, mobile phones, stethoscopes and intravenous catheters [5]. All dental personnel are at high risk including dentists, dental assistants and hygienists who may transmit infectious diseases to patients by the use of contaminated dental instruments or hands. This microbial cross contamination is particularly dangerous when considering immune deficient patients [6]. Occupational exposure to blood borne pathogens can be from the HIV virus, HEP B virus, HEP C virus. Exposure to

airborne pathogens can be from *Mycobacterium* TB and other potentially infectious agents [7]. Most exposure are accidental and can be prevented by following protective measures and following infection control guidelines by wearing gloves, mask, safety glasses, proper attire and sterilization of dental instruments and disinfection of dental units [8].

Methodology

A descriptive cross-sectional hospital-based survey was carried out during mid-December 2019 to mid-February 2020 on the patients visiting Altamash Dental Hospital Out Patient Department (OPD). The ethics committee of the institute supervised the study protocols. Participants gave consent and were also informed that their participation in the study will be anonymous, voluntary and non-compulsory. There was no intervention involved as it was a descriptive study. As a result, there was less than minimal risk to all the participants.

All new patients attending dental OPD in the age group of 11 - 90 years participated in the study and were given consent. Educated and illiterate groups both were taken in account in the age group of 11 - 90 years. For accessing the knowledge and awareness of public regarding cross infection control among patients (n = 160) seeking dental care, a cross sectional study was carried out. Only those patients were included in the study who agreed to participate and visited the dental hospital during the study period, till the estimated sample size was reached. In all a total of 160 patients were included in the study with the response of 100%. A close ended questionnaire consisting of 20 questions in English language was made and distributed among the patients. The questionnaire was divided in two parts: First part comprises of Demographic details of the study participants and second part consists of information about cross infection control methods and awareness.

As patients waited in the waiting area of Altamash dental hospital they were given the questionnaires. A dental hygienist was present with the patients as they filled the questionnaires to make sure that the patients understand it clearly. In order to complete the questionnaire 10 minutes were given after distribution. Results were subjected for statistical analysis. The results of the questionnaire were calculated and analyzed via the SPSS software version 20.

Results

The present study was carried out on 160 patients among them (63%) were males and (36%) were females. Patients were further divided on the basis of gender: group 1 were males and group 2 were females. The highest proportion was from group 1 (males). Distribution of patients according to education and gender is shown in table 1. The detailed education work in gender distribution is shown in table 1 showing the maximum number of undergraduate/graduate in group 1. On evaluation it was revealed that public perception of cross infection control is different among different patient groups. Most of the patients which included both males and females are in favour for a dentist to wear gloves. It was further observed that most of the dentist's wear gloves (66%), while 14% of the dentists do not bother to wear gloves. Moreover, 87% of the dentist wear face mask when they treat the patients, while on the other hand 6% don't use them. Besides, 75% of the patients did not contract any disease from a dentist, while 16% contracted diseases from dental clinics.

	Males	Females
Undergraduate	20	10
Graduate	42	15
Secondary education	28	18
Primary education	12	15

Table 1: Distribution of patients according to education and gender.

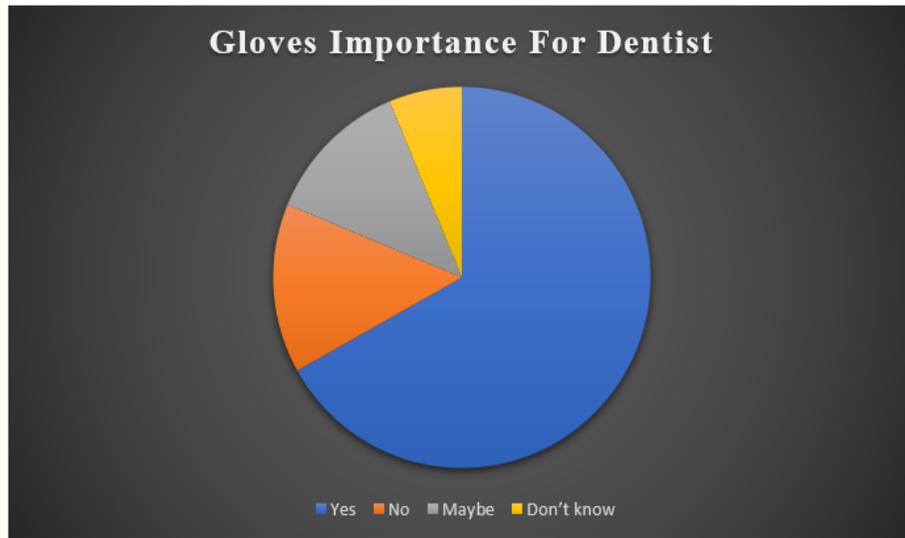


Figure 1: Gloves importance for dentist.

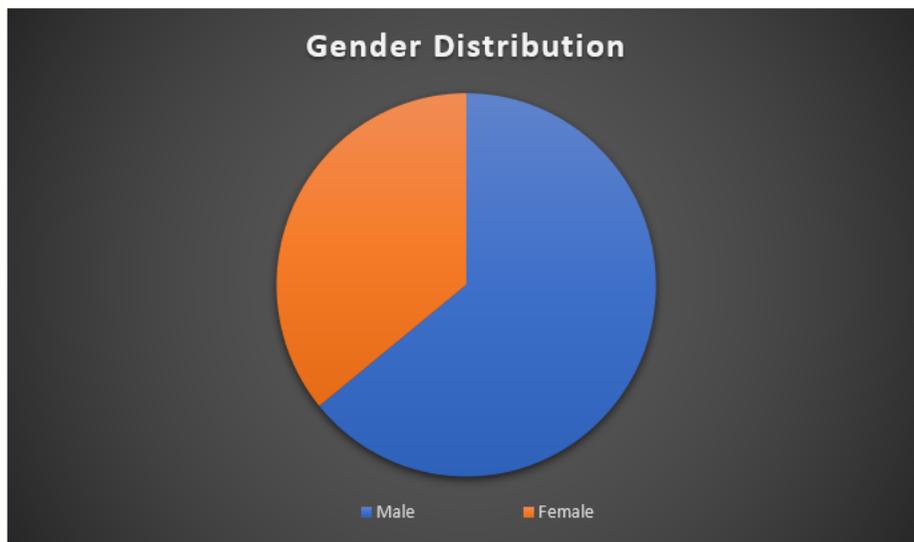


Figure 2: Gender distribution.

In addition to this 48% of the people know about the sterilization method, 51% were unaware about the sterilization method in dental clinic, 60% of the patient never wanted to be treated in a clinic where HIV is a risk factor, while 6% have no issue with the HIV patients. 40% of the patients wanted their dentist to follow double mask and double gloves protocol while treating a hepatitis B patient. However, 7% patient wanted their dentist to follow double mask and single gloves protocol while treating a hepatitis B patient. 88% of the patient's oral health is as important as their general health; although 11% of the patient's general health is more important than the oral health.

It was evaluated that 42% of the patient's think that protective eye wears are important for a dentist to wear, 46% of the patient's don't think that eye wears are important for a dentist to wear. 39% people say that their dentist changes his/her face mask for every patient while majority (51%) of the dentist don't change their facemask. On the other hand 63% of the patient's avoid dental visit due to perception of cross infection while 36% do not avoid dental visits. 42% of people see their dentist washing their hands before the treatment. 49% of people have an idea that a dentist has to change his/her gloves for every patient, 50% think that sterilization is important for infection control while 21% are not sure. 71% of dentist don't wear any protective plastic covering during the treatment. 61% of the people at Altamash Dental Hospital are vaccinated against hepatitis B while 28% are not vaccinated. 44% of the people in this survey don't have any idea about the disinfection of the dental clinic. It was further observed that 61% of the dentist put on new gloves before the treatment while 39% do not.

Lastly, the result of the study pointed out that educational level was one of the most important factors that governed the knowledge, perspective and behaviour of the patients.

Discussion

In the present study efforts were made to access the general public's perception about cross infection control. Our study has shown that majority of the patients delay dental visits due to the perception of cross infection. This study included 160 participants, out of which majority of the participants were educated.

A study was conducted in the Glasgow region which suggested that 60% of the respondents were aware that the dentist have been advised to wear gloves routinely, although majority of the people thought that the gloves were for the dentist's own protection [9].

In a study conducted in Nigeria in 2010, it was noted that there was a high level of acceptance on the use of gloves but a glaring lack of knowledge and acceptance on the use of facemask indicating a need for more effective public enlightenment on the use of barrier methods [10].

Another study was conducted in Mexico in the year 2000 which revealed contradictory attitudes towards HIV positive individuals and limited understanding of infection control recommendation. Educational and regulatory efforts are needed to promote better adherence to current infection control standards [11].

A study was conducted in Australia which showed that avoidance or delaying of dental visits due to the perceived cross infection. Risk was reported by an overall 3.6% of the people and this was higher in females and those who expressed concern about cross infection control [12].

Another study was conducted in New Zealand to investigate current procedures in New Zealand dental practices for control of cross infection. This study revealed that almost all practices had an autoclave but only 42% of practices autoclaved dental handpieces and 11% of practices wiped, cold disinfected or boiled extraction forceps [13].

Conclusion

The findings of this research concluded that education is one of the most significant factor effecting the knowledge of people regarding dental health. Majority of the patients were aware of the protocols followed in a dental clinic for a patient suffering from hepatitis whereas, 51% were unaware of the sterilization methods used in dentistry.

Contribution by Authors

Yousuf A Lakdawala: Supervisor, Topic Selection proof reading.

Sabeen Masood: Article writing, Statistical analysis, Layout of the article, Collection of references.

Sandhal Akhtar: Data collection, Article writing, Collection of references.

Mariyam Usman: Data collection, Article writing, Statistical analysis.

Sarah Billoo: Data Collection, Article Writing.

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