

KNOWLEDGE, ATTITUDE AND WORKING HABITS CONCERNING INFECTION CONTROL MEASURES AMONG DENTAL STAFF OF ISLAMABAD DENTAL HOSPITAL

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ABSTRACT

Catching of infection is a major threat to the dental staff in routine dental practice. Dentists are at a high risk of intercepting infections due to high level of aerosols associated with the dental rotary instruments, exposure of infectious material such as blood and body fluids, either by direct contact upon a needle stick injury or indirectly through the contaminated instruments or improperly disposed waste. Infection control is of a paramount importance in a dental setting to the extent that its necessity can no longer be questioned. The objective of this cross-sectional study was to assess the knowledge, attitude and working habits of dental staff working at Islamabad Dental Hospital. The objective was assessed via a questionnaire filled out by 175 dentists at IDH. With analysis by SPSS version 17, the results showed varying responses in each domain of knowledge, attitude and working habits. 171 dentists showed the adequate knowledge of the temperature required for autoclaving while 161 appeared to know the importance of isolation in infection control. Moreover, 169 out of 175 practically disposed off their gloves appropriately after the usage which shows that the attitude and knowledge of the dental staff is adequate while efforts need to be made in order to correct and improve the working habits for which educatory steps should be taken to refurbish the existing knowledge relating to the infection control amongst the dental staff in Islamabad Dental Hospital.

Key Words: Knowledge, Attitude, Working habits, Infection Control, Dental staff.

INTRODUCTION

Dentists are at a high risk of getting infections due to high level of aerosols associated with the dental rotary instruments and the limited working space that predisposes clinicians to the exposure.¹ They are also more prone to the exposure of infectious material such as blood and body fluids, either by a needle stick injury or indirectly through the contaminated instruments or improperly disposed waste. Infection control is of a paramount importance in a dental setting to the extent that its necessity can no longer be questioned. The upsurge of progressively detrimental and communicable diseases such as AIDS, Hepatitis B, Hepatitis C and

tuberculosis and the failure to have deduced their proper cure, have made it essential, that the infection control measures be strictly followed.² Dental staff must have a sound knowledge of infection control procedures in order to eliminate any possibility of cross infection. Cross infection can be defined as the transmission of infectious agents between patients and staff within a clinical environment.³

In 2003 the Centre for Disease Control and Prevention of the United States of America (CDC) updated their guidelines for infection control in a dental setting. According to the guidelines laid by CDC a safe working environment with a minimal risk of nosocomial infection is ensured among dental staff and their patients. CDC Guidelines emphasize on wearing protective masks and gloves on every patient and relinquishing them at the end of the treatment procedure. Wearing protective eye wear and clothing is also stressed upon.^{4,5}

Although varied recommendations and guidelines are issued by medical and dental societies as well as by the government organizations, studies project that infection is still not appropriately dealt with in the dental settings and hospitals.⁵ In spite of quantum leap in infection control protocols in recent years, infection control is still quite a dilemma in dental health care centers.⁶ Present study was done, to determine the level of knowledge, attitude and working habits con-

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cerning infection control measures among dental staff of Islamabad Dental Hospital.

MATERIALS AND METHODS

A cross-sectional survey was conducted in the month of March 2017 on 175 dental staff at Islamabad Dental Hospital. The questionnaire was selected from a previous research on pertinent topic.⁴ Few amendments were made in the selected questionnaire. After the review of concerned professionals the questionnaire was content validated and face validated. The questionnaires were distributed amongst the study persons in their respective departments and they voluntarily completed it. The questionnaire constituted of 15 closed ended questions. Any incomplete questionnaire was eliminated from the study and strict confidentiality for all responses was emphasized.

Statistical analysis for knowledge, attitude and working habits descriptive statistics was computed using the Statistical Package for Social Sciences (SPSS) software for Windows version 17 to obtain the frequencies and percentages. The results were presented as figures.

RESULTS

One hundred and seventy five dental staff filled the questionnaire and the results obtained were as follows. In the knowledge section of the study, results obtained indicated that almost all of the participants knew the bare minimum time required for the sterilization in the autoclave, i.e., 146 participants out of 175. The rest of the results obtained in the knowledge section are shown in Fig 1. 92 out of 175 participants preferred the use of a mouthwash on patients prior to the commencement of a dental procedure, as shown in Fig 2. Furthermore, 85% of the dental staff preferred using facemask, gloves, eyewear and protective clothing, Fig 3.

DISCUSSION

Awareness of infection control protocols and the consequences of its negligence are of paramount importance in today's age where the upsurge of the spread of diseases such as Hepatitis B, HIV and Tuberculosis is on the rise. The dental staff should consider the risk of treating the patients with probability of infectious disease. The dentists considering their patients as healthy may not follow the universal precautions or the CDC guidelines.

Previous studies entail results of working habits within Kampala and Uganda¹ which illustrate that there was a definite need for improvement. The possible explanation for their outcome may be attributed to lack of training and scarcity of resources. Only 72% respondents reported routinely hand washing in between the patients while 76.6% of respondents at IDH documented routine hand washing. Possible explanation for such a number could be the use of hand gloves which is believed to create an impermeable barrier between the

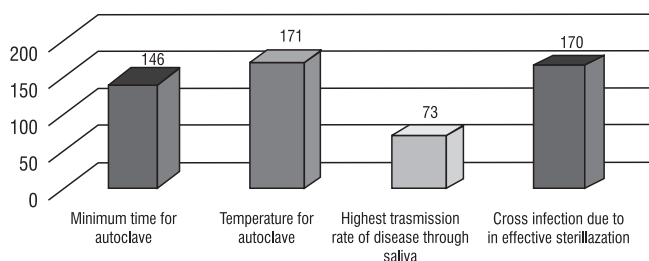


Fig 1: Knowledge of the Dentists Working in Islamabad Dental Hospital.

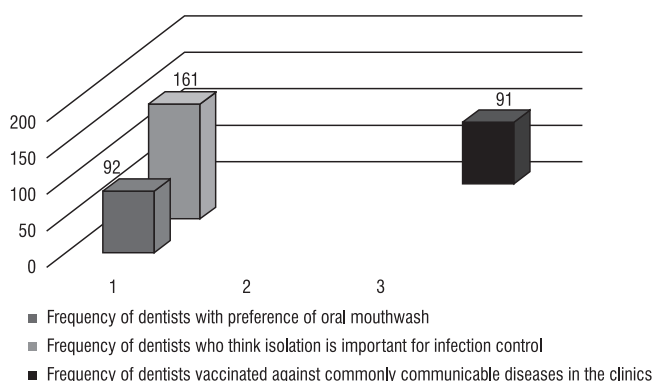


Fig 2: Attitude of Dentists Working in Islamabad Dental Hospital.

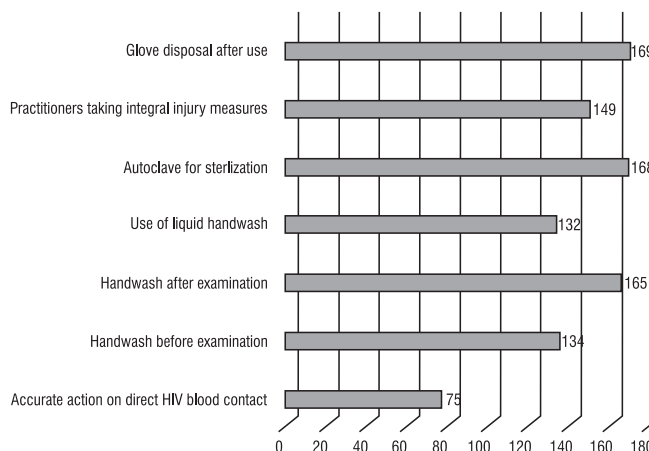


Fig 3: Working Habits of Dentists in Islamabad Dental Hospital.

patient and the practitioner, with little knowledge of the fact that the gloves have micro pores which do not make the gloves completely impermeable to microorganisms. Added to that, one other reason could be the time constraints and the huge in flow of patients.¹

In current study, most of the dental staff had been vaccinated against Hepatitis B. These results are similar to the findings of the study conducted at Dow University of Health Sciences by Mohiuddin S and others.⁷⁻¹⁰ The present study showed that only 52% of the Dental health practitioners (DHPs) had been vaccinated against Hepatitis B as compared to the 67.8% DHPs of DOW University of Health Sciences, similar study was conducted by Mehwish Feroz Ali et al.⁴ Possible

explanation could be an inadequate articulation of the threat posed by the hepatitis B virus to the DHPs in a clinical environment or simply carelessness.

Data from a study conducted in Chennai, India³ revealed that almost all the DHPs used either autoclave or hot air for sterilization, with an exception of only 2 which preferred disinfectant, compared to the results of present study which showed that 96% DHPs believed that the only effective option for sterilization is via autoclave while 4% thought washing and disinfection adequate.

The present study highlights that the DHPs at IDH preferred liquid soap as opposed to the results from a study conducted by Bipin Kumar Yadav and et al¹¹ which shows that most of the dentists preferred soap bars which the study also deems as unsuitable working habits in terms of infection control.

Results of a study conducted in Southern state of India¹², showed half of the respondents used chemical disinfection for their instruments. Al-Rabeah and Moamed¹³ reported that 37.9% of dentists sterilized their instruments by autoclaving while current study projects a 96% of autoclaving as the preferred method of sterilization.

One study conducted in Jordan, exhibited that 81% of the dentists made use of gloves while performing dental procedures. Another study among orthodontists in Illinois, US illustrated that the gloves were used 97%. The figure is about 94% in a Canadian study^{14,15} while 85% of participants from the present study affirmatively displayed the use of gloves and other necessary protective measures. It is vital that meticulous care and control should be exercised and ensured in order to provide a safe dental setup for everyone to working habits.

CONCLUSION

The outcome of the present study was positive about the knowledge of infection control measures but to improve the working habits amongst the dental staff there is definitely a need to transmit the acquired knowledge into working habits and the attitude. Almost half of the practitioners were not vaccinated against the commonly communicable diseases and were also unaware about taking the appropriate actions post HIV direct blood contact in the clinics for which we need to guide and educate them.

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| 3 Waheed Ghaffar Bari: | Data collection. |
| 4 Muhammad Mudassar Saleem: | Proof Reading. |