KNOWLEDGE AND AWARENESS IN MAINTAINING GOOD HEALTH PRACTICES DURING INFECTION OUTBREAK AMONG DENTAL STUDENTS - A SURVEY

S Sneka¹, Gayathri R, R.Gayatri Devi²*, V Vishnu Priya³

1. Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai, India.  
   E-mail Id: 151901041.sdc@saveetha.com

2. Assistant Professor, Department of Biochemistry, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai.  
   E-mail Id: gayathri.sdc@saveetha.com  
   Phone number: +9710680545

3. Assistant Professor, Department of Physiology, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai  
   E-mail Id: gayatridevi@saveetha.com

4. Professor, Department of Biochemistry, Saveetha Dental College and Hospital, Saveetha Institute of Medical and Technical Science (SIIMATS), Saveetha University, Chennai.  
   E-mail Id: vishnupriya@saveetha.com

*Corresponding author: R Gayathri

ABSTRACT:
Introduction: Infection control practices are crucial and important elements in clinical dentistry as there is an increase in the prevalence of infectious diseases globally. Most of the patients are not aware of their health as the incubation period for viral infections are usually long. It is the prime role of the dentist to be aware of the current situation and take preventive measures to safeguard their health. The aim of this survey is to assess the awareness in maintaining good health practices during infection outbreak among dental students.

Materials and Methods: An online survey was conducted among dental students to evaluate the knowledge and awareness of the good health practices to be taken by dental students to avoid COVID 19 infection. The study population was dental students, with a sample size of 100. The questionnaire consisted of 12 questions and was shared to the participants using online survey platform. The study was conducted in the month of May, 2020. The statistics done using SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant.

Results: From the survey, it was evident that 87 % of dental students were aware of the necessary precautions to be taken to protect themselves from infection and also to maintain good health during an infection outbreak, it was also evident that both male and female students were equally aware of maintaining good health practices to fight infection(p-value>0.05). Conclusion: From the survey, it was evident that dental students are much aware of practices to be followed to maintain good health amidst an infection outbreak; it was also evident
that both male and female students were equally aware of maintaining good health practices to fight infection. Though most of the dental students were aware of the preventive measures, the most crucial thing is to put it into practice.

Keywords: Infection, Disease, Awareness, Knowledge, Dentist, precaution

How to cite this article: Sneka S, Gayatri Devi GRR, Priya VV (2020): Knowledge and awareness in maintaining good health practices during infection outbreak among dental students- A survey, Ann Trop Med & Public Health; 23(S22): SP232340. DOI: http://doi.org/10.36295/ASRO.2020.232340

INTRODUCTION

Infection control practices are crucial and important elements in clinical dentistry [1] as there is an increase in prevalence of infectious disease among dental patients [2]. The patients visiting the dentist or dental clinic for their dental treatment may be healthy or might be suffering from various diseases [3]. Most of the patients are not aware of their health as the incubation period for various viral infections are usually long [4]. The transmission of some infections occurs mainly through blood, salivary droplets and contaminated instruments [5]. Compliance on the part of the dentist with standard precaution has been recognised [6] as being an efficient means to prevent and control infections [7]. Infection prevention must be made a priority in any dental health care settings [8]. At least one individual with training in infection prevention, the infection coordinator should be responsible to take care of both the patients and dental practitioners [9]. Dental clinics are places where infections can spread easily. And the dentists are at the high risk of exposure to infection [10]. It can be transmitted directly or through indirect contact [11]. There are various methods to prevent infection, but many dental practitioners lack the requirement for infection control [12]. Dental students can be exposed to serious health care associated infections, if the clinic is not equipped with necessary protocols [13]. There is limited information regarding the knowledge, awareness and practices of dental students [14]. Despite evidence supporting the effectiveness of infection prevention many dentists fail to implement them, this can result in serious other infection transfer owing to negligence [15]. Infection control procedures are actions taken in a health care setting to prevent the spread of infection [16]. Infections control precautions are necessary for all dental students [17] and dentists [18]. Infection control is important in dentistry and also it controls the spread of disease. The bacteria can carry the host of disease [19]. The bacteria associated with periodontal disease [20] can be spread through saliva if proper care and precaution methods are not followed. It might cause many diseases which are dangerous and might not be able to be controlled [21]. We can prevent these infections by wearing masks, gloves, protective eyewear, and gowns [22]. Prevention involves careful handling of sharp instruments, use of rubber dams to minimise blood spattering [23]. These methods help dentists [24] to prevent infection [25]. Prevention of cross contamination [26] helps in reducing infection [27].
The preventive measures not only involve handling the patients and equipment with care, it also involves the personnel care such as eating right food and maintaining good health. The aim of this survey is to impart awareness in maintaining good health practices during infection outbreak among dental students.

MATERIALS AND METHODS

Study design:
An online survey was conducted among dental students to evaluate the knowledge and awareness in maintaining good health practices during infection outbreak. The study population are dental students with a sample size of 100. The participants did the survey voluntarily and no incentives were given to them. Ethical approval and informed counsel from the participants were obtained.

Survey instrument:
The questionnaire was prepared after extensive review of the existing literature. The questionnaire was reviewed and amendments were made to improve clarity of pertinent questions and eliminate ambiguous responses. The survey instrument was a structured questionnaire with both open and close ended questions. It consists of a brief introduction regarding the purpose of the study, questions pertaining to demographic data and questions regarding research objectives. 10 questions were circulated to the participants via Google forms.

Data analysis:
Only completely filled online forms were included in this study. The filled response was verified by two reviewers and the collected data was entered on the same day. The statistics done using SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant. The study has been conducted in the month of May, 2020

RESULTS AND DISCUSSION:
87% of the students agree that they wear masks before treating patients whereas 12% of the students do not wear masks (figure 1). 67% of the students agree that they wash their hands frequently whereas 33% of them do not wash their hands (figure 2). When asked about their preference to use soap or sanitizer, 37 out of 54 male participants and 34 out of 45 female participants prefer to use soap for hand wash, 17 out of 54 male participants and 11 out of 45 female participants prefer to use sanitizer. Though statistically not significant, males seem to prefer soap than sanitizers. (figure 3). When asked about their awareness to get the patient history before treatment, 37 out of 54 male participants and 34 out of 45 female participants ask their patients for symptoms, 17 out of 54 male participants and
11 out of 45 female participants do not ask their patients for symptoms. Though statistically not significant male seem to be more aware in getting the patient history before treatment. (figure 4). 77% of the students treat the patient even if they have any infection whereas 23% of them will not treat the patients if they have any infection (figure 5). 59% of the students prefer to have homemade food whereas 41% of the students prefer outside food (figure 6). 38 out of 54 male participants and 39 out of 46 female participants prefer to boost their immunity by good food and exercise. 16 out of 54 male participants 7 out of 46 female participants who do not prefer the same. Females tend to be more precautious in keeping up health by following preventive measures than males. (figure 7). 56% of the students prefer ordering food online, 44% of the students do not prefer ordering food online (figure 8). 58% of the students take bath after their dental treatment, 42% of them will take bath (figure 9). 52% of the students are careful in avoiding infection, 41% of the students are very careful in avoiding infection remaining 4% of the students are not careful in avoiding infection. (figure 10)

A study by Abhinavsingh confirms that use of mask as infection control measures was practiced only by 2 students whereas in this study 87% of the students wear mask while treating a patient to prevent infection. [28] Only 14% of the participants willing to treat HIV patients and remaining are not interested in treating an HIV patient, whereas in this study 77% of them willing to treat the patients even if they have any infection and remaining 23% of them are not willing treat the patients [5] Thus the study results are more positive. The sample size is minimum so the results may vary, other researchers are not accurate. Conceived categories, preconceived categories, represent bias of simple view of reality. This creates more awareness and knowledge in maintaining good health practices during infection outbreak. It gives information about effects when we are not maintaining good health. It is very important that an health care practitioner to be more fit and healthy, knowledge and awareness to the general public is usually carried by these professionals. It is also understood that a health care practitioner cannot just deny treating a patient who has approached, instead they should be aware of necessary health care practices which will keep them healthy.

CONCLUSION:
From the survey, it was evident that dental students are much aware of practices to be followed to maintain good health amidst an infection outbreak, it was also evident that both male and female students were equally aware of maintaining good health practices to fight infection. Though most of the dental students were aware of the preventive measures, the crucial thing is to put it into practice.

Acknowledgement:
We thank Saveetha Dental College for providing us the support and study

Author Contribution:
S Sneka done the literature search, data collection, analysis, manuscript writing
Dr.R.Gayathri helped in data verification, manuscript drafting
Dr. V Vishnupriyaand Dr. R. Gayatri Devi contributed to title discussion

Conflict of Interest:
None declared

REFERENCE:


22. Menon A, V VP, Gayathri R. PRELIMINARY PHYTOCHEMICAL ANALYSIS AND CYTOTOXICITY


Figure 1 represents the distribution of participants based on their awareness towards wearing a mask when treating a patient, where the majority of 87% of the students agree (blue) that they wear masks before treating patients, while 12% (red) of the students do not wear (red) masks.
Figure 2 represents the distribution of participants based on their habit of washing hands frequently, where 67% of the students agree (blue) that they wash their hands frequently, 33% of them do not wash (red) their hands frequently.
Figure 3: Bar chart showing the association between gender and opinion on preference of handwashing. X axis represents gender and Y axis represents preference of individuals to use soap or hand sanitizer for washing hands. Majority of males prefer to use soap than females, however statistically not significant. Chi-square test, Pearson’s Chi-square value = 0.599, p value = 0.439 (>0.05), hence statistically not significant.
Figure 4 Bar graph representing the association between gender and their awareness in getting the necessary information regarding patient health before treatment to avoid infection. X axis represents the gender and Y axis represents the number of individuals who ask patients for the symptoms or any other infection before treatment. Most of the males ask for the symptoms before treatment when compared to females. Chi-square test, Pearson’s Chi-square value = 0.599, p value = 0.439 (>0.05) Statistically not significant.
Figure 5: Bar graph representing the association between gender and their opinion on treatment given to patients while suffering from cold or cough. X axis represents the gender and Y axis represents the number of individuals who give treatment to patients who suffer from cold or cough. Most of the females give treatment to patients even when they are suffering from cold or cough than males, however statistically not significant. Chi-square test, Pearson’s Chi-square value = 2.913, P value = 0.088 (>0.05), hence statistically not significant.
Figure 6 represents the distribution of participants based on their preference for home made or restaurant food, where 59% of the students prefer (blue) home made food, 41% of them prefer outside food (red).
Figure 7 Bar graph representing the association between gender and their opinion on boosting their immunity by taking good food and doing proper exercise. X axis represents the gender and Y axis represents the preference of individuals to take food that boost their immunity and to do exercise. Most of the females prefer to boost immunity when compared to males and it is statistically significant. Chi-square test, Pearson’s Chi-square value=7.832, P value = 0.005 (<0.05) and Statistically significant.
Figure 8 represents the distribution of participants based on their preference to order food online, where 56% of the students prefer (blue) ordering food online, 44% of the students do not prefer (red) ordering food online.
Figure 9 represents the distribution of participants based on the practice of taking bath once they reach home from a dental clinic to prevent infection, where 58% of the participants take bath (blue) and 42% of them don't have a habit (red) of taking bath.

Figure 10 represents the distribution of participants based on their awareness to implement necessary action to control infection, where 53% of the students were careful (blue) in avoiding infection, 41% of the students were very careful (red) in avoiding infection, and the remaining 4% of the students need to take more steps (green) towards it.