ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation Journal Home Page: www.ijrps.com

Knowledge and awareness of covid -19 symptoms among dental students - A questionnaire based survey

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Article History:

Received on: 01 Aug 2020
Revised on: 02 Sep 2020
Accepted on: 05 Sep 2020

Keywords:

COVID-19,
Pandemic disease,
Dental professionals,
Consultation,
Precautionary methods

ABSTRACT

COVID -19 is the most recent pandemic disease that has affected the world's population. We, as health care providers should be more responsible for reducing the transmission of this deadly disease. The aim of the survey was to assess the knowledge and awareness among dental professionals towards COVID -19 and reduce the spread among patients and co-workers. A cross-sectional study was conducted in a sample of 100 dental students by means of a questionnaire, using google forms, results were tabulated and analysed using SPSS. 24.8% prefer and rely on the fact that fever has been the main symptoms of COVID -19 while 32.7% of the respondents prefer on the fact that cough has been the symptoms leading to COVID -19 64% of the dental students are aware on the fact that patients should be checked on their temperature before the consultation. 36.3% of the dental students prefer no checking of temperature before the consultation. The results of the survey showed that some knowledge gaps exist among dental students regarding this very deadly disease and hence is an urgent need for training and conduct complete awareness regarding this deadly disease and control it by essential precautionary methods.

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ISSN: 0975-7538

DOI: https://doi.org/10.26452/ijrps.v11iSPL1.3087

Production and Hosted by

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INTRODUCTION

A coronavirus is a group of virus that can cause a range of symptoms including a range of symptoms including a runny nose, cough, sore throat and fever. Sometimes the virus is less prevalent in the body while for others its more likely to lead to pneumonia (Mustari and Rahman, 2020). They are usually spread through direct contact with an infected person (Khan and Naushad, 2020). The coronavirus gets its name from the crown-like spikes on its surface, including the newly formed of a virus, there are seven coronaviruses that can infect humans (Ibrahim, 2017). Two well-known coronaviruses are SARS and MERS. This new virus is called 2019 -nCov, It is very unclear on how easily it spreads from one person to person, but the CDC always recommends that anyone who may have been exposed to illness monitor themselves, for 14 days after close contact with an infected person (Al-Hazmi, 2016).

There have been two self-limiting SARS outbreak to date, which resulted in a highly contagious and potentially life-threatening form of pneumonia. These occurred from 2002 to 2004. The World Health (WHO) continues to monitor countries throughout the world for any unusual disease activity. If another SARS or COVID -19 outbreak were to occur, it should be possible to limit the spread of infection. This article will focus on different types of human coronaviruses, thor symptoms, and how they spread can be controlled on a large scale (Xu *et al.*, 2020). There is no cure for the coronaviruses. Human conorna viruses were first identified in the 1960s in the nose of patients with the common cold. Two human coronaviruses are responsible for a large proportion of common colds. Though dentists are exposed to many deadly diseases including carcinoma (Shree, 2019), and also have to handle surgical specimen of various diseases including biopsies, the current pandemic is a challenge due to its nature of spread and virulence of the virus (Krishnan, 2018; Sheriff and Santhanam, 2018). Therefore, dental professionals are exposed to a greater extent via the aerosol spread of this deadly virus. Hence, they should have knowledge regarding the mode of symptoms, mode of transmission and preventive measures so that they should have knowledge regarding the mode of symptoms, mode of transmission and preventive measures so that there would be no infection spreading through the dental operatory. Therefore the present study was conducted to assess the knowledge and awareness of dental professionals towards COVID -19 spread in India. The scare of coronaviruses has also unmasked the crevices in the integration of medicine and dentistry and also health systems have concluded negligence for the profession (Alqefari, 2017). Our team had conducted various studies among dental students to assess the knowledge about various conditions related to teeth (Gunasekaran and Abilasha, 2016; Sukumaran and Padavala, 2018) and its supporting structures (Manohar and Abilasha, 2019). Many awareness-based studies have been conducted by our team (Hannah, 2018) but there is a lacunae in the studies regarding the spread of various diseases among dentists, hence the present study was conducted to assess and improve the awareness regarding this pandemic. The main aim of the survey was to assess the knowledge and awareness among dental professionals towards COVID -19 and reduce their spread among individuals.

MATERIALS AND METHODS

The survey was conducted among 100 dental college students. A questionnaire was prepared, which consisted of 15 questions based on symptoms and spread of COVID -19. Random sampling method was used in this kind of survey. Data collection and interpretation was made with the help of SPSS software and the list of output variables were also assessed. The results were represented with a bar cart diagram. Chi-square type of analysis was also conducted and the statistical software used was SPSS software. The type of questions was close-ended. The data collection software used was through survey online using google forms. It was analyzed and cleaned up to excel sheet and was represented graphically through a bar graph. Association analysis was done by using the chi-square test using SPSS software.

RESULTS AND DISCUSSION

The study identified that (Figure 1) 64.7% of the respondents were female, while 35.3% of the respondents were male. (Figure 2) 47.1% came under the age group 19 -25, while 24.5% of the respondents come under the age group below 18%. (Figure 3) 63.7% of the respondents prefer checking temperature before the consultation of the patients, 36.3% prefer not checking the temperature of the patients during or before the consultation. Majority of the participants responded as fever and cough as the main symptoms of COVID -19.(62.5%). (Figure 4) 38.6% of the respondents prefer PPE kit as personal protection for them, while 19.8% of respondents prefer using medical goggles as personal protection. Majority of the participants responded as Yes we should check the temperature before consultation (63.7%). (Figure 5) 47.1% prefer not doing scaling during this period while 29.4% root canal during the period of the quarantine while 23.5% prefer not following any limitations to the treatment procedure. The majority of the participants responded as N95 mask as the preferred personnel protection (53.5%). (Figure 6) 53.5% say it is safe to perform extraction during COVID -19 with PPE kit while 46.5% prefer not using or think it is not safe to perform extraction. The majority of the participants preferred scaling as the most precautious method (63.5%). 101 participated in the study and (Figure 7) 48.5% were aware that lack of hygiene could lead to the spread of COVID -19. 64.5% of the respondents prefer checking the temperature of the patient before consultation and majority of the dentist are aware of COVID -19 symptoms and also find patients who have symptoms and risk of having COVID -19, and most of the dental students are able to correctly report known modes of transmission and also create awareness of measures which prevent COVID -19 transmission among dental clin-

ics. The majority of the participants preferred doing extraction during covid 19 (62.4%). (Figure 8) 62.4% prefer usage of PPE kit during the extraction of the tooth, and hence health care workers rely on PPE, which has been on rising demand and the supplies have been limited and hence mounting disruption. Majority of the participants accept the fact that there is a vaccine for this virus (65.4%). (Figure 9) 58.5% of the students wear masks and prevent the transmission of the virus. In a study, it was observed that 57.5% answered correctly that a mouth mask with white face facing in helped in preventing the disease on a large scale. Majority of the participants believe that wearing a mask can prevent infection (58.5%). (Camalier, 1937).

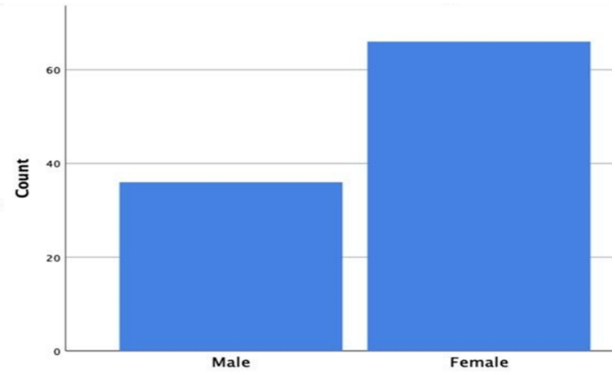

Figure 1: The gender of respondents

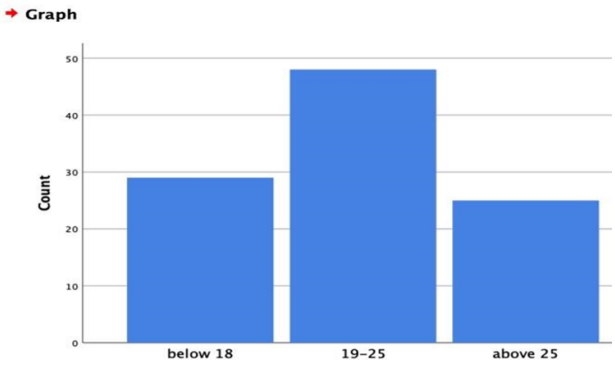

Figure 2: The age group distribution of the respondents

66.7% agreed that wearing mouth mask decreased the spread of respiratory droplets within individuals and hence reduced the spread of the virus (Mehtar *et al.*, 2007),(Figure 10) 82% respondents visited crowded places during the COVID -19 outbreak and doctors in private clinics also took measures to make their patients and attendants aware of the spread of the virus.

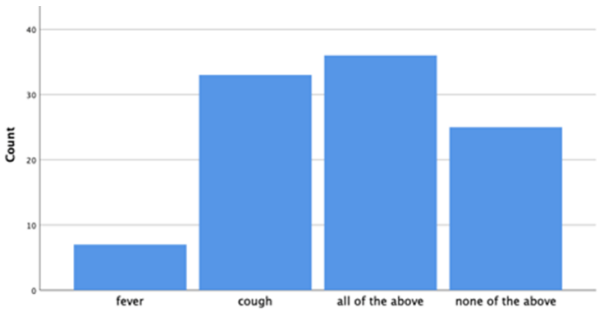

Figure 3: The awareness of symptoms of COVID 19

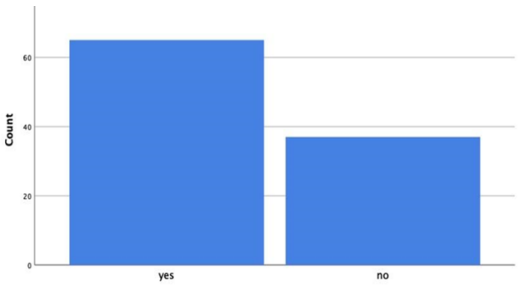

Figure 4: The distribution of respondents who check the temperature before the consultation

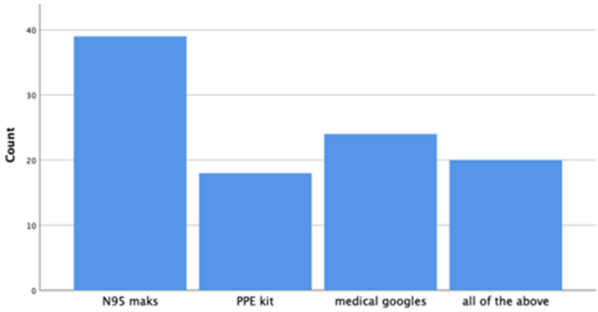

Figure 5: The distribution of respondents preferring N95, PPE kit and medical goggles for personal protection

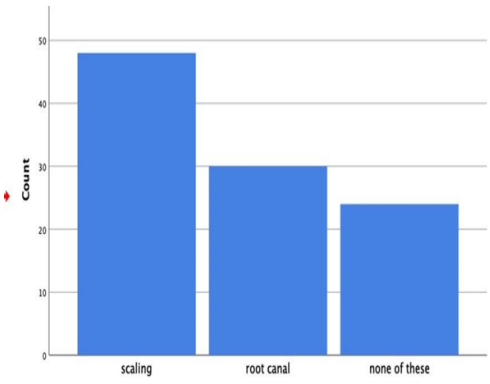

Figure 6: The distribution of the respondents who have taken precaution for various treatments during COVID -19

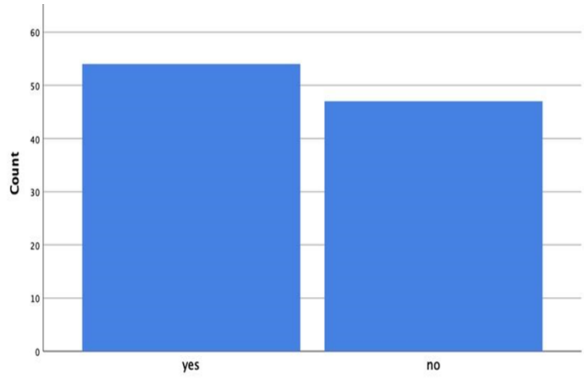

Figure 7: The distribution of respondents who prefer doing extraction during COVID -19

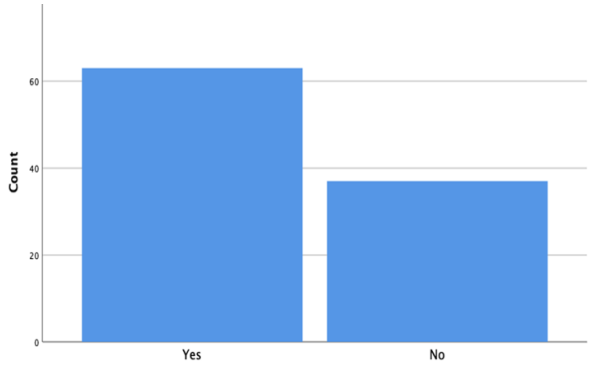

Figure 8: The response for whether there is a vaccine for the virus

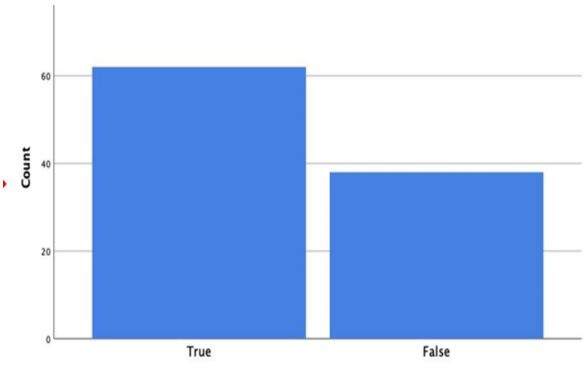

Figure 9: The number of respondents who believe that wearing a medical mask can prevent infection

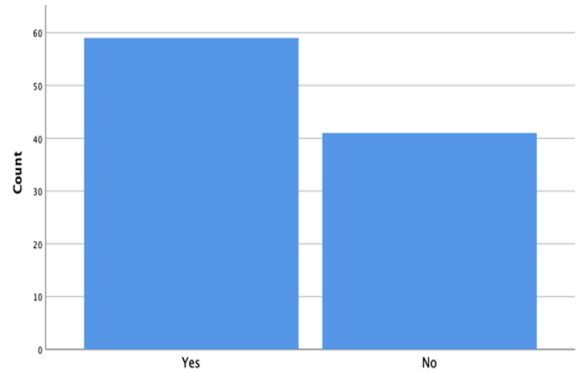

Figure 10: The number of respondents who have visited a crowded place recently

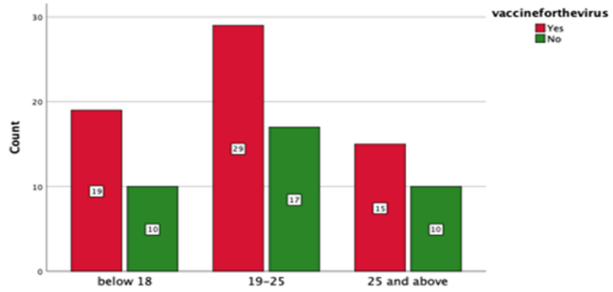

Figure 11: The association of age and knowledge of if any vaccine is present for the virus

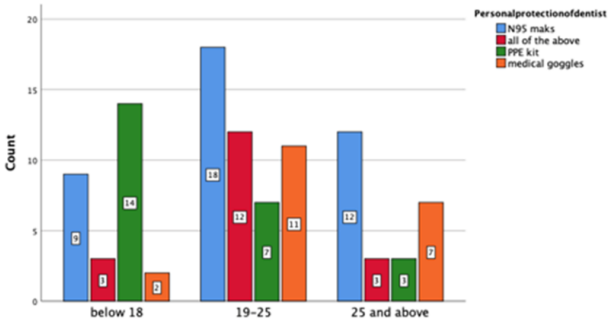

Figure 12: The association of age and the personnel protection preferred by the dentist

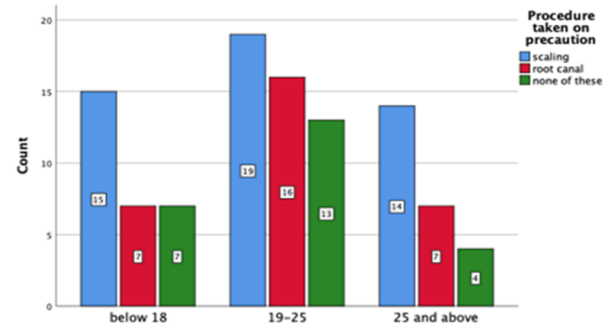

Figure 13: Association between age and the procedures which are taken on precaution during covid -19

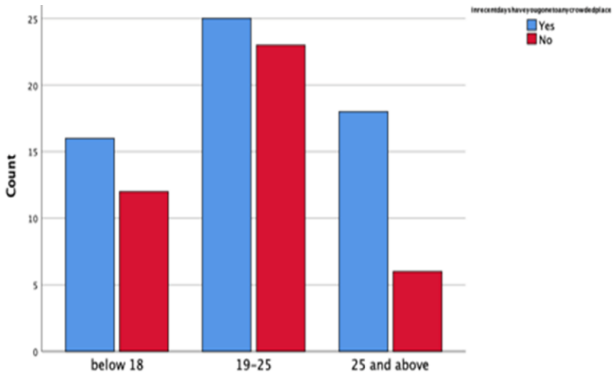

Figure 14: Association between age and the respondents who have visited a crowded place

Association between the age groups and various responses on the awareness about covid-19 was analysed using the chi-square test ($p<0.05$ was considered statistically significant), the graphs obtained are represented in Figure 11, Figure 12, Figure 13 and Figure 14. This graph represents the chi-square test analysis of age and knowledge of the respondents if any vaccine is present for the virus. The measured P-value is 0.106, which is statistically not significant. (Figure 11) This graph represents the association of age and the personnel protection preferred by dentists. The measured P-value is 0.008, which is statistically significant. Majority of the respondents in the age group of 19-25 responded as there is a vaccine for the virus. (P-value is 0.106, which is statistically not significant.). (Figure 12) This graph represents the association of age and the personnel protection preferred by dentists. The measured P-value is 0.127, which is statistically not significant. Majority of the respondents in the age group 19-25 responded with the N95 mask as the preferred personnel protection. (p-value is 0.008, which is statistically significant.) (Figure 13) This graph represents the association of age and the respondents who have visited a crowded place. The measured P-value is 0.041, which is statistically significant. Pearson chi-square test shows p-value is 0.127, which is statistically not significant. (Figure 14) Pearson chi-square test shows p-value is 0.041, which is statistically significant and shows the most aware age group was 19-25 years.

Of the 101 participants, 17.7% of dental students perceived COVID -19 very dangerous, 71.7% perceived it as moderately dangerous, while 9.5% perceived it as not dangerous (Dandagi, 2010). In a study, the participants were asked to return to the clinic and also follow up visits between vaccinations and clinical monitoring of patient was also observed (Fotedar *et al.*, 2016).

In a study conducted it shows that use of asthalin by asthmatic patients are more prone to enamel erosion on occlusal surfaces of a tooth which reduces the height of the tooth so asthmatic patients are more symptomatic and may be prone to COVID -19 (Harrita and Santhanam, 2019; Abitha and Santhanam, 2019). Climatic changes may also play a role in the spread of microorganisms hence more variation and lack of climatic control may increase the prevalence of viral diseases, especially covid-19 (Sarbeen and Gheena, 2016). Patients have to be treated with empathy, especially older individuals, which is essential, especially among students (Prasanna and Gheena, 2016; Palati *et al.*, 2020). Since older age group are the most affected, age estimation methods can also be used to identify the age of individuals whose age is unknown (Palati *et al.*, 2019). Evidence-based dentistry is also essential in practice to understand and treat patients with covid-19 (Ahad and Gheena, 2016). Medical negligence has to be considered as an important aspect in this current pandemic to avoid further spread of the disease (Uma *et al.*, 2020). Hence, in the current pandemic situation, it was the need of the hour to assess the awareness about covid-19 among the dental professionals.

CONCLUSION

The majority of healthcare workers and especially dental students, had good knowledge and positive attitude towards COVID -19. The sample size was unequally distributed and the ways to rectify the unequal distribution also not mentioned in the present study. Methods for controlling the spread are not mentioned which can be added in phase II of the study. However, the level of some knowledge and attitude is lower than that expected for their position level towards the virus. Dentists have limited resources and less awareness to protect the dental staff and other patients from COVID -19. Additional educational programmes are also required for the dentist during treatment of infected and normal patients in the current situation.

ACKNOWLEDGEMENT

The authors thank the management and students of Saveetha Dental College for helping us to conduct the study.

Funding Support

The authors declare that they have no funding support for this study.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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