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ORIGINAL ARTICLE

Knowledge, Attitude and Practices of Medical and Dental Practitioners Regarding COVID 19 Pandemic

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ABSTRACT

Objective: To assess the knowledge, attitude and practices of medical and dental practitioners regarding COVID-19.

Methodology: A cross sectional study was conducted in College of Dentistry, Sharif Medical and Dental College, Lahore from July 2021 to July 2022 on medical and dental practitioners. Medical and dental practitioners irrespective of their age, gender and specialty of practice were included in the study. Participants who refused to give consent to be included in the study were excluded. Informed consent was taken from the participants before data collection. Data was collected using a pre-validated questionnaire

Results: There was a statistically significant difference in the scores of attitude (p=≤0.001) and practices (p=≤0.001) while the non-significant difference in the scores of knowledge (p=0.200) across medical and dental practitioners regarding COVID-19 pandemic.

Conclusion: The level of knowledge, attitude and practices of dental practitioners was higher in comparison to the medical practitioners.

Keywords: COVID 19 pandemic, Dental practitioners, medical practitioners, knowledge, attitude, practice

INTRODUCTION

The coronavirus disease (COVID-19) emerged in late 2019 and has since spread vastly across the world taking the form of a pandemic[1]. Responsible for a severe respiratory infection better known as covid-19, this virus originated in Wuhan, China, and then spread vastly and rapidly throughout the entire world like wildfire[2]. The coronavirus can be transmitted directly or indirectly, most commonly through droplets that infect the mucous membrane of the oral cavity which has increased expression of the angiotensin-converting enzyme receptor 2 (ECA2), this receptor mediates entry of the virus in the cell and the subsequent rapid infection[23].

This pandemic has been extremely challenging, especially for the dental and medical health care workers. This virus may spread through various routes like coming in contact with the saliva or blood of an infected patient[4]. Due to this reason, dentistry has been majorly affected by COVID-19 owing to aerosol production and high chances of contact with the patient's saliva and blood[2]. The medical environment is at a high risk of exposure to any virus including the coronavirus and dentistry, specifically, falls under higher risk due to direct and frequent oral contact[5]. Sufficient knowledge and understanding among the healthcare workers of this virus, its spread, and preventive measures are imperative to avoid cross-contamination and the spread of covid-19[6].

Knowledge of the disease, whether it is about its spread, signs, or symptoms is really important if we intend to survive this pandemic[7]. According to a study concluded in 2020 in Dubai of all the health care workers who participated only 57% had enough knowledge about the Corona Virus Disease. However, less than two third of the participants had sufficient knowledge regarding the virus transmission, testing, and isolation of the positive cases. Approximately 33% of them had sufficient positive attitude scores and a majority of them had acceptable infection control practices [8]. Another multinational study which included participants from Asia, Americas, Europe, Africa, and Australia showed high knowledge and practice scores which are essential in combating this pandemic [9]. The aim of this study was to assess the knowledge, attitude and practices of medical and dental practitioners regarding COVID-19.

MATERIAL AND METHODS

A cross sectional study was conducted in College of Dentistry, Sharif Medical and Dental College, Lahore from July 2021 to July 2022 on medical and dental practitioners. The sample size was calculated to be 150, keeping a precision of 5%, confidence level 95% and prevalence of good practices regarding COVID-19 to be 89%[10], using an online sample size calculator. The sampling technique employed was convenient sampling. Medical and dental practitioners irrespective of their age, gender and specialty of practice were included in the study. Participants who refused to give consent to be included in the study were excluded. Informed consent was taken from the participants before data collection. Data was collected using a pre-validated questionnaire with a Cronbach alpha value of 0.7[8]. The questionnaire is divided into 4 parts: Demographic characteristics (5-items), knowledge (15-items), attitude (7-items) and practice (5- items). Knowledge consisted of 15 items (questions 1 to 15) assessing the participants' knowledge on COVID-19 etiology, signs and symptoms, treatment and management, prevention, transmission, and risk factors. Each question had the answer options of true, false, or I don't know. Only the correct answer was given a score of 1; all other answers scored 0, with a total score ranging from 0 to 15 for the entire section. Attitude consisted of 7- items (questions A1 to A7). Only the single answer that indicated a positive attitude was given a score of 1; other answers scored 0, with a total score ranging from 0 to 7 for the entire section. Practice also consisted of 5-items (question P1 to P5). Measures that were always practiced were given scores of 1; otherwise, they were scored 0. Accordingly, the maximum score for this section was 5.

Recorded data will be coded and entered using SPSS statistical package version 23. P value ≤ 0.05 will be taken as significant. Mann Whitney U test was used to find the statistical difference in knowledge, attitude and practice of medical and dental practioners. Eta squared was to find the strength of association of knowledge, attitude and practices regarding COVID 19 pandemic and the area of practice (medical and dental practitioners)

RESULTS

A Cross sectional comparative study was conducted in 150 participants with 66.7% medical practitioners while 33.3% dental practitioners. All the participants were less than 30 years of age with 35.3% males and 64.7% females.

Table 1 shows a statistically non-significant difference in COVID 19 pandemic knowledge scores between medical and dental practitioners. The mean rank scores of knowledge of dental

practitioner was higher than the medical practitioners. The strength of association of knowledge regarding COVID 19 pandemic with the area of practice (medical and dental practitioners) was weak (η2=0.011) as shown in table 1.

Table 1: Difference in the scores of knowledge of medical and dental practitioners regarding COVID 19 Pandemic

	Profession	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	P value	Eta squared (η2)
Knowledge Score	Medical practitioner	100	73.73	7373.00	2323.000	-1.283	0.200	0.011
	Dental practitioner	50	79.04	3952.00				

Table 2 shows a statistically significant difference in the scores of attitudes of medical and dental practitioners towards COVID 19 pandemic. The mean rank score of attitudes of dental practitioners was found to be higher as compared to the medical practitioners. The strength of association of the attitudes regarding COVID 19 pandemic with the area of practice (medical and dental practitioners) was weak (η2=0.1) as shown in table 2.

Table 2: Difference in the scores of attitudes of medical and dental practitioners towards COVID 19 Pandemic

	Profession	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	P value	Eta squared (η2)
Attitude score	Medical practitioner	100	68.86	6886.00	1836.000	-3.844	≤0.001	0.1
	Dental practitioner	50	88.78	4439.00				

Table 3 shows a statistically significant difference in the scores of practices of medical and dental practitioners regarding COVID 19 pandemic. The mean rank score of practices of dental practitioners was higher in comparison to the medical practitioners. The strength of association of the cross infection control practices regarding COVID 19 pandemic with the area of practice (medical and dental practitioners) was moderate (η2=0.4) as shown in table 3.

Table 3: Difference in the scores of practices of medical and dental practitioners regarding COVID 19 Pandemic

	Profession	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	P value	Eta squared (η2)
Practice score	Medical practitioner	100	57.25	5725.00	675.000	-7.893	≤0.001	0.4
	Dental practitioner	50	112.00	5600.00				

DISCUSSION

The dental clinic is not an exception to the potential spread of virus amongst personnel or individuals; in fact, because of the close contact with patients and the nature of dental treatment, the dental clinic may be a high risk environment for disease transmission[11]. This challenging circumstance has provided a chance to re-evaluate our understanding and knowledge of infection control methods in dentistry and develop new approaches[12].

According to our study a statistically non-significant difference in COVID 19 pandemic knowledge scores between medical and dental practitioners. The mean rank scores of knowledge of dental practitioner (79.04) was higher than the medical practitioners (73.73). The strength of association of knowledge regarding COVID 19 pandemic with the area of practice (medical and dental practitioners) was weak (η2=0.011). The importance of dental practitioners in preventing COVID-19 spread cannot be overstated. According to a study done in Indonesia 96% of the participants were aware of infection prevention techniques. A study done in Uganda proposed that the knowledge of dental health workers about COVID-19 was 80% and their practices to avoid the transmission of the COVID-19 were considerable as 54% of FHCWs wore mask while attending a patient and 96% of FHCWs washed their hands before and after patient contact[13]. According to one study 93.3% medical practitioners had a good level of knowledge regarding COVID 19 while only 6.7% were found to be poorly equipped with it[14].

With regards to attitude of the HCWs regarding COVID 19 pandemic it has been reported that, about 60% avoided rendering treatment to the patients having any symptom of COVID-19[13]. According to our study a statistically significant difference in the scores of attitudes of medical and dental practitioners towards COVID 19 pandemic. The mean rank score of attitudes of dental practitioners (88.78) was found to be higher as compared to the medical practitioners (68.86). The strength of association of the attitudes regarding COVID 19 pandemic with the area of practice (medical and dental practitioners) was weak (η2=0.1)

Medical practitioners are also at the first line risk of acquiring the infection, owing to the frequent exposure to the infected patients and this highlights the importance of meticulous dealing, preparedness, and precautions amongst medical practitioners[15]. In a research done among working dentists in Jordan, it was discovered that 71.7% were aware of the method of transmission and infection control measures in dental clinics, and considered COVID-19 a chronic condition[16]. Our study reported that a statistically significant difference in the scores of practices of medical and dental practitioners regarding COVID 19 pandemic. The mean rank score of practices of dental practitioners (112.00) was higher in comparison to the medical practitioners (57.25). The strength of association of the cross infection control practices regarding COVID 19 pandemic with the area of practice (medical and dental practitioners) was moderate (η2=0.4). With regards to practices it has been reported that 94.3% had good while 5.7% had poor practices regarding the same[14]. Personal protective equipment (PPE), alcohol-based sanitation, and overall hygiene are imperative[17].

The medical and dental practitioners should be well aware of the risks this disease poses and have an understanding regarding its prevention and transmission and knowledge, adequate training, sufficient resources, therefore, are crucial for the prevention of cross-contamination and the spread of covid-19[18].

Limitation: A larger sample size and a multicenter study would have helped us unravel more findings

CONCLUSION

The level of knowledge, attitude and practices of dental practitioners was higher in comparison to the medical practitioners.

Conflict of Interest: None

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