Original Research Article

KNOWLEDGE REGARDING COVID-19 AWARENESS AMONG PRIVATE DENTAL PRACTITONERS IN KARACHI

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ABSTRACT:

OBJECTIVE: Study is to assess knowledge about corona among private dental practitioners in Karachi.
STUDY DESIGN: Prospective cross sectional study.

MATERIAL &METHOD:This study is a cross-sectional study conducted during the time period of May, 2020 to Sept, 2020 in Karachi. The online questionnaire was divided into 2 sections, the first one included a biodata section including years of practice and clinic area. The second section comprised of knowledge regarding disinfection techniques against COVID-19 and modes of transmission of COVID-19. There were 10 multiple choice questions to assess the presence of SARS-CoV-2 on different surfaces found in the clinic. Effectiveness of various disinfectants and hand sanitizers was asked and the viability of SARS-CoV-2 on steel surfaces, tissue papers, glass and plastic material.

RESULTS: As our study focuses only private dental practitioners, we contacted them through emails and questionnaires were sent. Responses were received by 125 dentists and 20 dentists did not provide with completely filled questionnaire. Among total of 145 dentists, 67.2% (n=84) were males and 32.8% (n=41) were female practitioners. Amongst 125 dentists, 58.4% (n=73) had adequate knowledge regarding disinfection, viability of virus on different surfaces and proper protective equipment. 33 dentists scored total of 6 out of 10 with only 19 dentists having score of <6.

CONCLUSION: The global pandemic of 2019 has led to drastic changes in healthcare setups and way of providing healthcare services. In this study we found that around 60% of dentists have adequate knowledge about disinfection and modes of transmission of COVID-19. Private dental practitioners need to take adequate protective measures and disinfection techniques to prevent transmission.

KEY WORDS: COVID-19,Knowledge,Awareness,Dental Practitoners

INTRODUCTION:

Corona virus 2019 (COVID-19) is the biggest health emergency reported in 2019. The global pandemic is caused by novel corona virus "SARS-CoV-2"and it belongs to the class of acute respiratory syndrome corona viruses. "SARS-CoV-2" has been labeled as global health emergency in March, 2020 and this is the third outbreak of corona virus in the duration of last 20 years(1). First outbreak of corona virus was in 2002-2003 resulting in severe acute respiratory syndrome (SARS) with 8000with mortality rate of 10 %(2). The second outbreak occurred in 2012-2103 with Middle East Respiratory Syndrome (MERS) affecting 27 countries with mortality rate of 34%(3). The first two outbreaks were limited but the third outbreak has been spread globally, but has reported 3% mortality. SARS-CoV-2 can be spread by respiratory droplets or through direct contact with infected human being/infected surfaces. Spread through direct contact is through oral, nasal or ocular membrane mucous secretion. Respiratory droplets carry the virus in aerosolized form generated from infected person cough/breath (4). Few evidences suggest that SARS-CoV-2 can be detected in saliva and asymptomatic patients can transmit the virus by aerosol generation (5). During the global pandemic almost every non-urgent healthcare services were suspended to avoid spread of disease. Dental care services of tertiary care hospital were also stopped to decrease risk of contamination. In contrast private dental practitioners must have been providing services but they need to have adequate disinfection services (6). As healthcare professionals are bound to provide urgent healthcare services to every patient, patients with COVID-19 need to be dealt with proper protective equipment. Dental care during this global pandemic requires the dentist to wear extra protective equipment as the virus can be transmitted by oral mucous membranes (7). According to the occupational safety and health administration, dentists are at high risk of contracting COVID-19 infection as they have close contact to oral mucous membranes (8). Many dental setups all over the world have been shut due to the pandemic and also due to less patient inflow. The risk of contracting the virus increases as some instruments produce aerosols such as hand pieces and scalers (9). As the global pandemic started, there was increased fear and anxiety due to decrease knowledge about the virus which would describe the adequate protective equipment needed. A survey conducted in 2020 to assess the fear of contracting the virus by healthcare professionals was done and more than 80% doctors fear the risk of contraction of virus. Social media and mass media have played a major role in bringing up fear in public (10).

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MATERIAL &METHOD:

This study is a cross-sectional study conducted during the time period of May, 2020 to Sept, 2020 in Karachi. The aim of this study is to assess knowledge about corona among private dental practitioners in Karachi. Sample size of the study was calculated 145 minimum participants using Open epi website. Confidence interval was taken as 95% and the margin of error as 5% to assess the response by dentist. Eligibility criteria included male or female dentists practicing privately in their own setups in the city of Karachi. Dentist who agreed upon participating in the survey and understood the survey were included in the study. No age limit of the dentist was limited in the survey. The survey was conducted by online questionnaire which was provided to the dentist through emails. All the participants were instructed to completely fill the questionnaire provided with details of their setup. All the participants were assured that their data would be kept anonymous and it only aims to assess the knowledge of dentists regarding corona. The online questionnaire was divided into 2 sections, the first one included a biodata section including years of practice and clinic area. The second section comprised of knowledge regarding disinfection techniques against COVID-19 and modes of transmission of COVID-19. There were 10 multiple choice questions to assess the presence of SARS-CoV-2 on different surfaces found in the clinic. Effectiveness of various disinfectants and hand sanitizers was asked and the viability of SARS-CoV-2 on steel surfaces, tissue papers, glass and plastic material. Total score was calculated out of 10 and each multiple choice question was given one point upon correct answer. Total score of ≥ 7 was described as having adequate awareness regarding corona prevention, total score of 6 indicated a positive result and ≤ 6 indicated unsatisfactory knowledge regarding corona prevention. Before starting the study a pilot study was conducted with 20 participants. Analysis was done using SPSS version 20. Mean and standard deviation was used for numeric variables and percentage was used for categorical assessment.

RESULTS:

As our study focuses only private dental practitioners, we contacted them through emails and questionnaires were sent. Responses were received by 125 dentists and 20 dentists did not provide with completely filled questionnaire. Among total of 145 dentists,

67.2% (n=84) were males and 32.8% (n=41) were female practitioners. Table-2 shows the gender distribution of private dental practitioners in Karachi

Majority of the dentists (89%) were operational during the peak COVID-19 pandemic and have been providing regular and urgent dental care services to patients. Data analysis of knowledge of dentists regarding disinfection and corona awareness was done. Table-2 shows the score of dentists out of total of 10 marks. A score of > 7 signifies adequate knowledge regarding disinfection, viability of virus on different surfaces and proper protective equipment. Total score of 6 shows satisfactory knowledge regarding corona prevention and score of <6 shows poor knowledge for prevention of corona. Amongst 125 dentists, 58.4% (n=73) had adequate knowledge regarding disinfection, viability of virus on different surfaces and proper protective equipment. 33 dentists scored total of 6 out of 10 with only 19 dentists having score of <6.

Most of the dental practitioners had good knowledge about symptomatology of COVID-19 and 93% of participants had answered correctly about it. Whereas 7% of individuals had incomplete knowledge about it as shown in figure-1.

DISCUSSION:

This global pandemic has been the deadliest as it has reached a global death toll 0f 1.1 million individuals and infecting 39 million individuals (11). COVID-19 has equally spread into developed and developing countries, but the developed countries have been working better to prevent eradication (12). The rapid spread of COVID-19 has increased the susceptibility of infection by population regardless of the symptoms. Dental practitioners will most likely encounter a patient positive for COVID-19 but having no symptoms. Hence, there must be a pre-screening protocol to minimize spread of virus to doctor and other patients as well. Dental care was essential for patients having COVID-19 as severe odontogenic pain and dental trauma as it requires urgent management (13). There are no major symptoms during the incubation period and this is the time period when the virus spreads. Every patient should be considered positive for COVID-19 until proven otherwise in the pandemic. Hospitals and healthcare services must renew their disinfection policies according to international policies. Healthcare professionals are the leaders in this pandemic and they have the main role of providing healthcare services without risking the patient to acquire infection (14). Thus, it is very crucial for dentists to maintain standard operating procedure (SOP) and wear proper

protective equipment to protect themselves (15). In a study conducted in India, there was more than 90% awareness regarding symptoms, modes of transmission and testing techniques and procedures. WHO infection control guidelines were also asked by dental practitioners in India and 79.7% had complete knowledge regarding the guidelines, whereas 6.2% did not had any knowledge (16). In our study which is conducted among private dental practitioners in Karachi, 58.4% had good knowledge of disinfection regarding corona, its symptomatology and testing. Whereas 15.1% of dentists had poor knowledge regarding the disease and were carrying out dental procedures at the clinic. In a prospective study conducted in India, it was stated that majority of dentists have not been carrying out procedures with aerosol generating sprays and 35% dentists have only been delivering emergency endodontic therapies (17). An article on transmission modes of COVID-19 has stated that airborne spread via aerosol production of COVID+ve patients increases the chances of transmission. A survey regarding fear and anxiety related to COVID-19 transmission has showed that 70% of dentists have asked not to panic and strictly follow WHO guidelines. 65% of the dentists told that there need to be specific workshops for healthcare professionals and nurses to prevent transmission of this virus (18).

CONCLUSION:

The global pandemic of 2019 has led to drastic changes in healthcare setups and way of providing healthcare services. In this study we found that around 60% of dentists have adequate knowledge about disinfection and modes of transmission of COVID-19. Private dental practitioners need to take adequate protective measures and disinfection techniques to prevent transmission.

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TABLE-1:

GENDER DISTRIBUTION OF PRIVATE DENTAL PRACTITIONERS

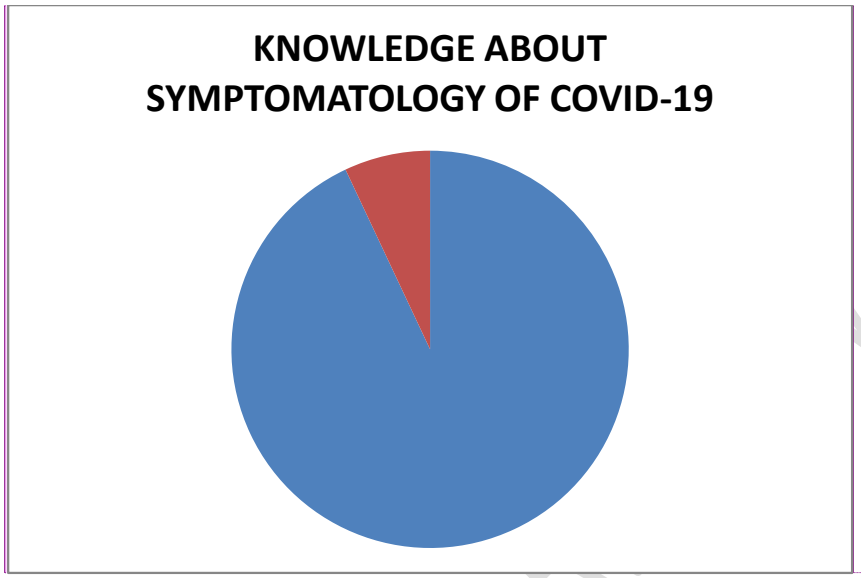
GENDER	FREQUENCY (n)	PERCENTAGE (%)
MALE	84	67.2%
FEMALE	41	32.8%

TABLE-2:

SCORE REGARDING KNOWLEDGE OF COVID-19

TOTAL SCORE (OUT OF 10)	FREQUENCY (n)	PERCENTAGE (%)
≥ 7	73	58.4%
6	33	26.4%
< 6	19	15.1%

Figure No.1Knowledge About Symptomatology Of Covid-19



Comment [A3]: Add data values

Datas were presented inadequately, It would be more informative if you presented all the datas collected.

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