

جا معة الإمام عبد الرحمن بن فيصل IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY كلية طـب الأسـنـان|College of Dentistry

IAUDENT RESEARCH BULLETIN

COVID-19 Special Issue

CONTRIBUTION OF THE COLLEGE OF DENTISTRY IN COVID-19 RELATED RESEARCH

Total Publications

15

Q1/Q2

Average IF 2.09

Highest IF **3.02**

Accepted papers



4 | IAUDENT RESEARCH BULLETIN

PUBLISHED PAPERS

Risk Assessment of Healthcare Workers at the Frontline against COVID-19

Ali S, Noreen S, Farooq I, Bugshan A, Vohra F. Pak J Med Sci. 2020;36(COVID19-S4):S99-S103.

Indexing: Scopus: 🔵

Web of Science:

PubMed:

Abstract

The novel coronavirus disease 2019 (COVID-19) is a global pandemic. Healthcare workers (HCWs) are on the frontline of treating patients infected with COVID-19. However, data related to its infection rate among HCWs are limited. The aim was to present evidence associated with the number of HCWs being infected with COVID-19 from most viral affected countries (Italy, China, United States, Spain, and France). Furthermore, we looked into the reasons for HCWs COVID 19 infections and strategies to overcome this problem. Early available evidence suggested that HCWs are being increasingly infected with the novel infection ranging from 15% to 18% and in some cases up to 20% of the infected population. Major factors for infection among HCWs include lack of understanding of the disease, inadequate use and availability of Personal Protective Equipment (PPE), uncertain diagnostic criteria, unavailability of diagnostic tests and psychological stress. Therefore the protection of HCWs by authorities should be prioritized through education and training, the readiness of staff, incentives, availability of PPEs, and psychological support.

Dentists thoughts about COVID-19

Al-Ansari A.

Evid Based Dent. 2020;21(2):60-61.

Indexing: Scopus:

Web of Science:



Abstract

Data sources: Self-developed survey. Data extraction and synthesis: This was a cross-sectional study using a self-administered online survey. Results: Out of 700 randomly selected dentists in Jordan, 368 completed an online survey. Of those, 36% reported that the incubation period for COVID-19 is 1-14 days. The majority were aware of the symptoms of the disease and can identify affected patients. Nonetheless, 36.7% of dentists did not believe it to be a serious public health issue. Conclusions: This group of Jordanian dentists was generally aware of COVID-19 symptoms and mode of transmission. Clinical practice guidelines should be made available to dentists by their associations during such crises.

COVID-19 and healthcare workers in Pakistan: Are we losing this fight?

Ali S, Noreen S, Farooq I. Evid Based Dent. 2020;21(2):60-61.

Indexing: Scopus:

Web of Science:



Abstract

The first case of novel corona virus disease 2019 (COVID-19) emerged from Wuhan, China in December 2019. Ever since, it has spread globally and affected almost every country of the world. For this reason, the World Health Organization (WHO) has declared it as a pandemic. The symptoms of COVID-19 include fever, cough, dyspnoea, and pneumonia. The disease spreads by inhaling air droplets, by directly contacting the contaminated surfaces, or by contacting a person with already existing condition. As some of the patients suffering from COVID-19 appear symptomless, the advice given currently is to practice hand hygiene and social distancing. Healthcare workers (HCWs) all over the world are fighting on the frontlines to curb the spread of this disease. Just like a soldier who goes to war needs protective equipment (Kevlar and helmet) and weapons, HCWs also need personal protective equipment (PPE), supportive medicines, and essential equipment like ventilators. Unfortunately, reports are emerging from different countries that HCWs are getting infected with COVID-19. The International Council of Nurses (ICN) has reported that COVID-19 infection affecting HCWs in Italy makes up 9% of the total reported cases. In China, more than 3,000 HCWs are infected with COVID-19 as of 1st Apr, 2020.0 The HCWs who got secondary COVID-19 infection from a hospital setting makes up 15% of the total reported cases in Spain. In France, 490+ HCWs working in government sector are now reported to have contracted COVID-19.

The psychological effects of the COVID-19 pandemic and coping with them in Saudi Arabia.

AlHumaid J, Ali S, Farooq I.

Psychol Trauma. 2020;12(5):505-507.

Indexing: Scopus:

Web of Science:



Abstract

This commentary summarizes the psychological effects of the COVID-19 pandemic and the people's response to the steps taken by the Saudi government to decrease the impact of this psychological trauma and stress. It is concluded that people are responding well to the threat of psychological trauma imposed by this disease and are following the instructions of their government and health regulatory body. (PsycInfo Database Record (c) 2020 APA, all rights reserved).

Dental Facilities During the New Corona Outbreak: A SWOT Analysis

Gaffar B, Alhumaid J, Alhareky M, Alonaizan F, Almas K.

Risk Manag Healthc Policy. 2020;13:1343-1352.

Indexing: Scopus: 🔵

Web of Science:

PubMed:

Abstract

Recently, there have been many global outbreaks of diseases. The latest is the coronavirus disease of 2019 (COVID-19) pandemic. The virus has spread worldwide and is transmitted mainly through droplets or by touching contaminated surfaces. Globally, healthcare systems are challenged due to a lack of workplace safety and professional obligations in addition to the rapid spread of the virus. Dental facilities are at greater risk due to the nature of dental care. The aim of this review study was to provide a situational analysis within dental facilities during the new COVID-19 outbreak. Published papers concerning dental facilities and COVID-19 were retrieved from PubMed, search engines, and organizational websites. All data were reviewed, arranged into themes, and then categorized either as strengths or weaknesses with respect to addressing the COVID-19 pandemic in dental facilities, and accordingly, threats and possible opportunities to the handling of the pandemic were identified. Preparedness of dental facilities during the current pandemic is a weakness that needs to be addressed promptly. Shortage of dental care providers, cyber security, economic losses, and ethical challenges are possible threats due to the current outbreak. Coordination and prompt communication among all healthcare providers during such outbreaks is a strength that needs to be supported. This strengths, weaknesses, opportunities, and threats (SWOT) analysis can be a useful tool for guiding decision-making as it is crucial during the current pandemic to work on weaknesses, avoid threats, and utilize all future opportunities.

Concerns, perceived impact, and preparedness of oral healthcare workers in their working environment during COVID-19 pandemic

Chaudhary FA, Ahmad B, Ahmad P, Khalid MD, Butt DQ, **Khan SQ** J Occup Health. 2020;62(1):e12168.

Indexing: Scopus: 🔵 🛛 V

Web of Science:

PubMed:

Abstract

Objective: The aim of the study was to evaluate the oral healthcare workers' concerns, perceived impact, and preparedness in COVID-19 pandemic. Methods: This cross-sectional study was carried out at 10 different dental hospitals in Pakistan from March to June 2020. A 35 items valid and reliable guestionnaire was used to assess the concerns, perceived impact, and preparedness of oral healthcare workers (OHCW) in COVID-19 pandemic. Chi-squared test and logistic regression were used for analysis. Results: A total of 583 OHCW participated in this study. The odds of having the awareness about the risk of exposure and fear of getting infected, were greater in the clinical than non-clinical OHCW (OR: 52.6; OR: 15.9). For social network concerns, the clinical OHCW were more likely to be concerned about their colleagues (OR: 6.0). The clinical OHCW have greater odds of worrying about telling the family/friends about the risk exposed to (OR: 2.55), being avoided because of the job (OR: 3.20) and more likely to be feeling stressed (OR: 4.31). Less than 50% of the participants felt that their institutions are well prepared and only 12.6% had attended an infection control training session. Most participants practiced self-preparation such as buying masks and disinfection (94.3%, 98.3%). Conclusion: The majority of OHCW felt concerned about their risk of exposure to infection and falling ill from exposure and infecting friends/family. There is a need for training of infection control and PPE and minimizing fear and psychological impact on OHCW should be the priority in any preparedness and planning for combating COVID-19.

Behavior change due to COVID-19 among dental academics-The theory of planned behavior: Stresses, worries, training, and pandemic severity

Madi M, Abdelsalam MM, et al.

PLoS One. 2020;15(9):e0239961.

Indexing: Scopus:

Web of Science:

PubMed:

Abstract

Objective: COVID-19 pandemic led to major life changes. We assessed the psychological impact of COVID-19 on dental academics globally and on changes in their behaviors. Methods: We invited dental academics to complete a cross-sectional, online survey from March to May 2020. The survey was based on the Theory of Planned Behavior (TPB). The survey collected data on participants' stress levels (using the Impact of Event Scale), attitude (fears, and worries because of COVID-19 extracted by Principal Component Analysis (PCA), perceived control (resulting from training on public health emergencies), norms (country-level COVID-19 fatality rate), and personal and professional backgrounds. We used multilevel regression models to assess the association between the study outcome variables (frequent handwashing and avoidance of crowded places) and explanatory variables (stress, attitude, perceived control and norms). Results: 1862 academics from 28 countries participated in the survey (response rate = 11.3%). Of those, 53.4% were female, 32.9% were <46 years old and 9.9% had severe stress. PCA extracted three main factors: fear of infection, worries because of professional responsibilities, and worries because of restricted mobility. These factors had significant dose-dependent association with stress and were significantly associated with more frequent handwashing by dental academics (B = 0.56, 0.33, and 0.34) and avoiding crowded places (B = 0.55, 0.30, and 0.28). Low country fatality rates were significantly associated with more handwashing (B =-2.82) and avoiding crowded places (B = -6.61). Training on public health emergencies was not significantly associated with behavior change (B = -0.01 and -0.11). Conclusions: COVID-19 had a considerable psychological impact on dental academics. There was a direct, dose-dependent association between change in behaviors and worries but no association between these changes and training on public health emergencies. More change in behaviors was associated with lower country COVID-19 fatality rates. Fears and stresses were associated with greater adoption of preventive measures against the pandemic.

COVID-19 outbreak and its monetary implications for dental practices, hospitals and healthcare workers

> **Farooq I, Ali S.** Postgrad Med J. 2020;96(1142):791-792.

Indexing: Scopus:

Web of Science:



Abstract

The novel COVID-19 came under limelight few months back (December 2019) and has recently been declared a pandemic by WHO. It has resulted in serious financial implications being faced by dental practices, hospitals and healthcare workers. Dental practice currently is restricted to provision of emergency dental care whereas, many hospitals have also cancelled elective procedures to save finances for COVID-19 treatment which is expensive and unpredictable. In addition, healthcare workers are also facing financial challenges in this difficult time. Competent authorities should step in to help dental practices, hospitals and healthcare workers in order to ensure the provision of all types of healthcare efficiently in these testing times and beyond. An Appraisal of COVID-19 Prevention Guidelines from Global Health Professional Bodies and Implications for the Dental Profession

Akhtar S, Almas KA, Siddiqui IA, Smith S.

Tropical Dental Journal.2020;43(171).

Indexing: Scopus: 🛑 Web of Science: 🛑

PubMed:

Abstract

Severe acute respiratory syndrome Coronavirus CoV-2 (SARS-CoV-2) infection was declared a pandemic on March 11st, 2020 by the World Health Organization (WHO). Covid-19 is a novel corona virus infection which assaults the respiratory system. The infection presents with similar symptoms as SARS-CoV, MERS and pneumonia, and creeps to the lungs in later stages, leading to life-threatening illness. There is still a myth regarding its' spread, breakdown of the immune system, prevention and treatment. Frontline health care workers, especially oral health care workers (OHCWs), are among one of the highest at-risk personnel. In the absence of proven drug treatment and vaccine availability, it is of utmost importance to comply with the guidelines of various international health care professional bodies. Therefore, the preventive guidelines have been reviewed and implications for the dental profession have been emphasized. The aim of this review was to briefly appraise the prevalence of Covid-19, its etiological considerations, the clinical signs and symptoms, morbidity and fatality, the health care challenges to OHCWs, and the current impacts on the dental profession and future implications. It is envisaged that OHCWs in different parts of the world can benefit from the concise presentation of the COVID-19 preventive guidelines for their routine dental practices.

Knowledge of dental academics about the COVID-19 pandemic: a multi-country online survey

Madi M, Abdelsalam MM, et al.

BMC Med Educ. 20(1), 399.

Indexing: Scopus: 🔵

Web of Science:

PubMed:

Abstract

Background: COVID-19 is a global pandemic affecting all aspects of life in all countries. We assessed COVID-19 knowledge and associated factors among dental academics in 26 countries. Methods: We invited dental academics to participate in a cross-sectional, multicountry, online survey from March to April 2020. The survey collected data on knowledge of COVID-19 regarding the mode of transmission, symptoms, diagnosis, treatment, protection, and dental treatment precautions as well as participants' background variables. Multilevel linear models were used to assess the association between dental academics' knowledge of COVID-19 and individual level (personal and professional) and country-level (number of COVID-19 cases/ million population) factors accounting for random variation among countries. Results: Two thousand forty-five academics participated in the survey (response rate 14.3%, with 54.7% female and 67% younger than 46 years of age). The mean (SD) knowledge percent score was 73.2 (11.2) %, and the score of knowledge of symptoms was significantly lower than the score of knowledge of diagnostic methods (53.1 and 85.4%, P < 0.0001). Knowledge score was significantly higher among those living with a partner/spouse than among those living alone (regression coefficient (B) =0.48); higher among those with PhD degrees than among those with Bachelor of Dental Science degrees (B = 0.48); higher among those seeing 21 to 30 patients daily than among those seeing no patients (B = 0.65); and higher among those from countries with a higher number of COVID-19 cases/million population (B = 0.0007). Conclusions: Dental academics had poorer knowledge of COVID-19 symptoms than of COVID-19 diagnostic methods. Living arrangements, academic degrees, patient load, and magnitude of the epidemic in the country were associated with COVD-19 knowledge among dental academics. Training of dental academics on COVID-19 can be designed using these findings to recruit those with the greatest need.

COVID-19 outbreak, disruption of dental education, and the role of teledentistry

Farooq I, Ali S, Moheet IA, AlHumaid J.

Pak J Med Sci. 2020;36(7):1726-1731.

Indexing: Scopus: 🔵

Web of Science:

PubMed:

Abstract

The novel coronavirus disease 2019 (COVID-19) has affected the whole world and has now been declared a Pandemic by the World Health Organization (WHO). Although the mortality rate of this virus is low, it is especially potent against people with underlying systemic conditions. Dentistry is a profession where the doctor, as well as the dental staff, works in close vicinity to the patient's mouth. Dental education has two core components; didactic and clinical training (including patient care). Dental education has been interrupted in the past due to certain events (Arab Spring and SARS outbreak). Currently, the pandemic of COVID-19 has disrupted dental education globally as most of the dental schools and universities in the world have closed amidst the COVID-19 outbreak. Teledentistry is a subspecialty of telemedicine that helps in the provision of educational activities, advice, and diagnosis about treatment over a distance with the help of technology like video conferencing. The current overview summarizes the potential role of teledentistry in continuing the dental educational process in terms of delivery of didactic components, clinical training, and patient care. It can be concluded that with modern updated devices and tools, teledentistry can be an effective way to prevent disruption of dental education and it can be utilized in continuing the dental educational process in this critical time of the COVID-19 outbreak.

Pandemic preparedness of dentists against coronavirus disease: A Saudi Arabian experience

Al-Khalifa KS, AlSheikh R, Al-Swuailem AS, et al. PLoS One. 2020;15(8):e0237630.

Indexing: Scopus: 🔵

Web of Science:

PubMed:

Abstract

Background: Dental offices are among the highest risk for transmission of the COVID-19, having the potential to transmit the virus via routine dental procedures. This crosssectional study assessed the preparedness and perception of infection control measures against the COVID-19 pandemic by dentists in Saudi Arabia. Materials and methods: This online survey addressed the impact and perception of the COVID-19 pandemic on dental practice in Saudi Arabia. The questionnaire comprised 26 closed-ended questions. Descriptive statistics included frequency distributions with percentages. In addition, the significance between the different demographic variables and guestions about dentists' perception of the COVID-19 pandemic was tested using the Chi-square test. Results: COVID-19 management in dental clinics varied in terms of adherence to the Ministry of Health (MOH) guidelines. Dental clinics' screening guestionnaire for patients showed good adherence (67%), while the lowest agreement was detected with the guestion on the existence of an airborne infection in the isolation room (15%). Almost two-thirds of the respondents agreed that the dental reception area adopted the proper COVID-19 preventive measures. Greatest accord was observed in their answers on questions about dentists' perception of the COVID-19 pandemic, ranging from 64%-89%. In addition, there were statistically significant differences in guestions about the perception of dentists towards the COVID-19 pandemic by different demographic variables such as age and years of work experience (p < 0.05). Conclusion: The response of most dentists regarding the preparedness and perception of infection control measures against the COVID-19 pandemic was positive. Dental clinics need to adhere more to the MOH recommendations in preparedness of their facilities or by educating their dentists and staff.

Dental and medical student's knowledge and attitude toward covid-19: A cross sectional study from Pakistan

> Ali S, Alam B, Farooqui FA, Almas K, Noreen S. Eur J Dent.2020;14(suppl S1):S105-S112.

Indexing: Scopus: 🔵 Web of Science: 🛑

PubMed:

Abstract

Objective: The aims of this study were to investigate the awareness, knowledge, and attitudes of Pakistani medical and dental undergraduate students toward COVID-19 during the surge of its outbreak. Materials and methods: The multicentered, cross-sectional study was carried out nationwide among undergraduate medical and dental students. A convenience sampling technique was used. A self-developed online guestionnaire was pretested to be completed by the participants. It was distributed using social media. The survey was comprised of questions related to demographics, health status, general hygiene perception, understanding, and the learning attitudes of the students. Comparisons of the knowledge scores and the attitude responses with the demographic information were done using the independent t-test, one-way ANOVA, and Chi-square, as appropriate. Results: Of the 937 total respondents, 353 (38%) were males and 582 (62%) were females; two students did not mark their gender. Of these, 680 (73%) were dental students and 257 (27%) were medical students. The mean knowledge score of the female dental students (5.15 \pm 1.08) was significantly higher than that of the male students (4.87 \pm 1.09). Overall, the mean knowledge score was statistically higher among the medical students in comparison to the dental students (5.21 \pm 1.15, 5.05 \pm 1.09; p = 0.054), respectively. Conclusion: The medical and dental students were both aware of the importance of the use of a mask. The medical students had a greater awareness regarding the mode of transmission, symptoms, and origin of COVID-19. However, the dental students showed better understanding of the use of surgical masks and the correct protocol for hand washing. Social media was considered the main source for COVID-19 related information.

Current clinical dental practice guidelines and the financial impact of COVID-19 on dental care providers

Ali S, Farooq I, Abdelsalam M, Alhumiad J.

Eur JDent.2020;14(suppl S1):S148-S153.

Indexing: Scopus: 🔵

Web of Science:

PubMed:

Abstract

The novel coronavirus disease 2019 (COVID-19) has been acknowledged as a pandemic by the World Health Organization (WHO). The aim of this study was to review guidelines issued by different health regulatory bodies amid the COVID-19 outbreak and financial constraints faced by dentists globally. Relevant papers and news articles were identified in Google Scholar and PubMed. The search was made using the keywords "COVID-19," "COVID-19 and dentistry," and "the financial impact of COVID-19 on dentistry." Studies and news articles published in languages other than English were excluded and a final selection of 53 relevant studies, guideline documents, and news articles were made. The outbreak of COVID-19 has affected all businesses including general dental practices, which are suffering huge financial losses as they have been advised to provide only emergency dental care. These recommendations should be appreciated as a positive step but they have caused serious financial implications for dental practices. It can be concluded that current dental practice globally is limited to the provision of emergency treatments only. This step is appreciative, but has resulted in huge financial losses sustained by dental care providers (DCPs) worldwide. The governments and health regulatory bodies of developed countries are trying to help dental practices to evolve from this troublesome situation, but there is no visible policy from the underdeveloped world that could help the DCPs to save their practices from closing down due to the financial constraints.

Knowledge of dentists, dental auxiliaries, and students regarding the COVID-19 pandemic in Saudi Arabia: a cross-sectional survey

Shahin SY, Bugshan AS, Almulhim KS, AlSharief MS, Al-Dulaijan Y, Siddiqui I, al-Qarni FD.

BMC Oral Health, 2020;20,363.

Indexing: Scopus: Web of Science:

PubMed:

Abstract

Background: This study aimed to assess the knowledge of dental professionals in Saudi Arabia regarding severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease 2019 (COVID-19). Methods: A guestionnaire was developed to assess various dental professionals from both governmental and private sectors through online and social media outlets. Results: A total of 1,033 guestionnaires were collected (273 dental students, 193 dental auxiliary personnel, 544 dentists). In all, 63.4% of the respondents worked in hospitals. Of all the respondents, 44.9%, 33.4%, and 21.7% worked in governmental clinics, academia, and the private sector, respectively. Overall knowledge of the incubation period and route of transmission of SARS-CoV-2 was consistent across all dental professions. Knowledge of handsoap cleaning time was significantly different among dental professionals (p < 0.001). Dental professionals displayed significant disagreement on the survival of SARS-CoV-2 outside the host (p<0.001). Furthermore, 75.1% of the respondents were reluctant to treat a suspected COVID-19 patient, and 92% of the participants believed that the mode of transmission was droplet inhalation. Fever, coughing, and shortness of breath were identified as the most common symptoms of COVID-19. Most standard methods of prevention in the dental office were selected by at least 50% of the participants. Conclusions: Dental professionals seem to be consistent regarding their knowledge of the incubation period of SARS-CoV-2. However, knowledge of viral survivability and recommended hand-soap washing time was significantly variable among the professionals. A high degree of apprehension toward suspected COVID-19 patients existed among all dental professionals. Pandemic-awareness campaigns are essential among healthcare providers.

ACCEPTED PAPERS

#	Authors	Title	Journal
1	Alsalman WT, Alharbi SM, Albattah AH, Almas K.	Effects of the outbreak of COVID 19 on oral health care workers (HCWs) at the regional dental center in Qassim, Saudi Arabia.	Saudi Journal of Oral Sciences
2	Almas K, Khan AS, Tabassum A, Nazir MA, Afaq A, Majeed A.	Knowledge, Attitudes, and Clinical Practices of Dental Professionals during Coronavirus Disease 2019 (COVID-19) Pandemic in Pakistan.	European Journal of Dentistry
3	Mahmoud MM, Abuohashish HM, Khairy DA, Bugshan AS, Moothedath MM, Khan AM.	Pathogenesis of Dysgeusia in COVID-19 patients: A scoping review.	European Review for Medical and Pharmacological Sciences
4	Madi M, Abdelsalam MM , et al.	Perceived Preparedness of Dental Academic Institutions to Cope with the COVID-19 Pandemic: A Multi- Country Survey.	International Journal of Environmental Research and Public health
5	Haridy R, Abdalla MA , Kaisarly D, Gezawi ME .	A cross-sectional multicenter survey on the future of dental education in the era of COVID-19: Alternatives and implications.	Journal of Dental Education
6	Ali S , Tauqir S, Alam BF, Farooqi F, Khan AM, Khabeer A .	COVID-19 knowledge, attitude, and awareness among preclinical and clinical dental students: An online- based cross sectional survey	Journal of Oral Research

PAPERS SUBMITTED FOR PUBLICATIONS

#	Authors	Title
1	Al Humaid J, Khan SQ, Farooqi F, Alhareky M, Alonaizan F, Al Harbi F.	COVID-19: Impact of early decision and type of lock-down over the spread of the virus.
2	Moheet IA, Khan SQ, Farooqi FA, Alhareky M, Alonaizan F	Low Reported COVID-19 Cases in South Asian Countries: A Luck of Nature or A Ticking Time Bomb.
3	Alshahrani MS, Alshaqaq HM, Alhumaid J , Binammar AA, AlSalem KH, Alghamdi A, Abdulhady A, Yehia M, AlSulaibikh A, Al Jumaan M, Albuli WH.	High-Flow Nasal Cannula Treatment in Patients with COVID-19 Acute Hypoxemic Respiratory Failure.

ON GOING PROJECTS

#	Authors	Title	
1	Ellakany P, et al.	Mental Health and Wellbeing of Adults During COVID-19 Pandemic	
2	Khabeer A, et al.	Knowledge and Attitude of Dental Students Regarding COVID-19 ar their Perceptions about its Challenges on Dental Education	



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COVID-19 Special Issue-

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