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LETTER TO THE EDITOR

Dentists' perception toward COVID-19: A cross-sectional study among a sample of Egyptian dentists

SARS-CoV-2 is a novel emerging coronavirus that first caused (COVID-19) disease in 2019 (World Health Organization (WHO), 2020), and COVID-19 is detected in saliva, which makes it as a potential transmission route in dental practice (Sabino-Silva et al., 2020; Xu et al., 2020). The control of saliva-related transmission in the dental clinic is critical, particularly in the epidemic period of COVID-19. Many precautions should be taken in hospital settings and private dental practices in order to avoid the possible spread of COVID-19 among patients, dentists, dental assistances, and nurses (Wong et al., 2020).

This cross-sectional study targeted the population of Egyptian dentists who worked in universities, public and private clinics, or other healthcare settings. This survey was conducted in April and May of 2020. An online questionnaire using Google Forms was used to collect the data. The questionnaire was given to dentists through Facebook groups and an Egyptian dental syndicate.

A total of 413 Egyptian dentists participated in this study (232 females and 181 males). 59% of the participants' age were 30 years old, one third of participants were general dentists, and around half of the participants had a private practice. During COVID-19 pandemic, 29% of participants fully closed their clinics, 23.7% were open only for emergency, and the least percent (6.7%) of participants closed their clinic and only 25% for regular work. Emergencies were defined as pain, swelling, and trauma. The use of a rubber dam is advised during applicable dental procedures as it significantly minimizes the spread of saliva- and blood-contaminated aerosol, especially when high-speed hand pieces are used. Rubber dam can reduce airborne particles by 70% (Samaranayake et al., 1989). If rubber dam isolation is not possible, manual devices such as Carisolv and hand scaler are recommended for caries removal and periodontal therapy in order to minimize aerosol generation (Peng et al., 2020; Samaranayake et al., 1989). Most of the participants chose extraoral radiographic technique as panorama since taking a periapical radiograph may stimulate saliva secretion and coughing (Vandenberghe et al., 2010; Table 1).

60% of the dentists read CDC and ADA instructions. However, the information about COVID-19 that a majority of dentists surveyed relied upon was taken from social media and non-scientific papers. Next, frequent sources of information were scientific papers and internet research that highlight the influence of social media on information spread. Regarding COVID-19 courses, 70% of the participants did not take online courses or workshops nor did they belong to chat groups.

The most important control measures for control of spread of COVID-19 infection include hand hygiene before and after finishing the dental procedure with soap and water or using an alcohol-based hand sanitizer in the dental practice as the WHO recommends. Personal protective equipment (PPE) is important for infection control in the dental treatment. Most of the surveyed participants

TABLE 1 Dentists' information regarding dental treatment and general disinfection knowledge

Variable	Dentists number (%)
1) What kind of dental treatment can be performed during the COVID−19 outbreak?	
Emergency only	356 (86.2)
Elective dental treatment	37 (8.96)
Full dental treatment	20 (4.84)
2) What is the meaning of emergency in dental practice?	
Swelling	5 (1.2)
Trauma	2 (0.48)
Swelling and severe pain	21 (5.08)
Severe pain and trauma	41 (9.92)
Swelling and trauma	6 (1.45)
Swelling, severe pain, and trauma	299 (72.4)
3) What is the type of radiograph preferred during the COVID−19 outbreak?	
Panorama	279 (67.55)
Periapical	35 (11.1)
I do not know	71 (22.6)
No radiograph	28 (8.9)
4) Is it recommended to use rubber dam to limit the spread of COVID−19 in restorative and endodontic procedures?	
Agree	338 (81.84)
Uncertain	57 (13.8)
Disagree	18 (4.36)
5) Is it effective to properly wash your hand with water and soap?	
I rather will use 70% alcohol following hand wash	115 (27.85)
Yes	297 (71.9)
No	1 (0.24)

(continues)

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TABLE 1 (continued)

Variable	Dentists number (%)
6) What kind of mask you will use during patients examination and treatment?	
N95 or KN95 respirator only	151 (36.56)
N95 or KN95 respirator or Surgical mask	162 (39.23)
Surgical mask	96 (23.24)
No mask	4 (0.97)
7) What will you use for your eye protection?	
Face shield	179 (43.34)
Goggles	46 (11.14)
Face shield, Goggles	174 (42.13)
Nothing	14 (3.39)
8) What is a recommended disinfectant for dental units, floors, and surfaces?	
Regular soap and water	75 (18.04)
30% alcohol	84 (20.36)
2%sodium hypochlorite	126 (30.54)
50%sodium hypochlorite	103 (25.13)
I do not know	25 (5.93)

preferred to wear N95 or surgical mask with face shield or eye goggles. The recommended disinfectant to frequently touched surfaces or objects includes hydrogen peroxide, quaternary ammonium, sodium hypochlorite, and ethanol at various formulation types and contact times (Chigurupati et al., 2020). Most of the participants preferred sodium hypochlorite and ethanol as surface disinfectants, using regular soap and water for clothes (Table 1).

The results of this survey can assist in national training strategies in Egypt and elsewhere related to COVID-19 and other issues as they arise. Surveying dental students, residents, and practicing dentists will ascertain their current level of knowledge. From this starting point, local, regional, and national governing bodies can develop the appropriate educational curriculum to ensure the highest level of preparedness for their safety as well as that of their colleagues, staff members, and patients for this and other future health crises.

AUTHOR CONTRIBUTIONS

Doaa Adel-Khattab: Conceptualization; Formal analysis; Investigation; Project administration; Writing-original draft. **Amira Mohammad Samy:** Investigation; Methodology; Resources; Validation. **Robert A Horowitz:** Conceptualization; Project administration; Supervision; Writing-review & editing.

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