

KNOWLEDGE AND AWARENESS REGARDING COVID – 19 AMONG THE DENTAL PRACTITIONERS OF WEST BENGAL – A QUESTIONNAIRE SURVEY

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ABSTRACT

Background: COVID – 19 pandemic is one of the most important current medical concerns across the globe. COVID – 19 era necessitates incorporation of new procedures of approach and management in different aspects of routine dental practice. The present study aims to throw light on the knowledge and awareness regarding COVID – 19 among the dental practitioners of West Bengal. **Methods:** An online questionnaire survey was conducted through mail and social media to collect the responses of dentists practicing in West Bengal. The questionnaire was divided into three sections: 1. background characteristics of dentists who participated in the survey and 2. Awareness among dentists regarding COVID – 19. Responses of dentists treating children were only included. **Results:** The participants were found to have sufficient awareness regarding the pandemic. Both social media and health authorities helped them to practice with adequate knowledge of prevention. **Conclusion:** Overall the dentists of West Bengal was found to be well aware of the general aspects of COVID - 19 and incorporated various safety protocols in relation to infant oral health in the light of this new era.

KEYWORDS: COVID – 19 pandemic, questionnaire, pediatric dentistry.

INTRODUCTION

The COVID – 19 outbreaks were first reported in December 2019 in Wuhan, China, when a group of individuals presented with atypical pneumonia. The World Health Organization (WHO) declared COVID 19 a public health emergency of international concern (PHEIC) on January 30, 2020, and declared the outbreak a worldwide pandemic on March 11, 2020.^[1]

The vast majority of COVID-19 patients experience moderate symptoms such as dry cough, sore throat, and fever. The published data on COVID-19 in the world supports the concept that the majority of children do not have serious condition.

There are three theories that supports the same.

- It was seen that children have a lower proclivity for immunological dysregulation.^[2]

- Second, pro-inflammatory response indicators such as C-reactive protein are infrequent in children, indicating a lower inflammatory response to infection.^[3]
- Finally, decreased expression of the angiotensin converting enzyme 2 (ACE-2) receptor, which is required for virus binding, lowers the frequency of COVID -19 in children.^[4]

The disease has a 7-14 day incubation period. Children with this infection may be asymptomatic or have just minor symptoms. These symptoms may include fever, dry cough, exhaustion and upper respiratory symptoms such as nasal congestion. It is unlikely for it to develop to lower respiratory tract infections. In addition, unusual symptoms such as nausea, diarrhoea, hyposmia, and dysgeusia have been observed. With the emergence of COVID-19 cases in children, there has been a recent trend of Kawasaki-like disease, also known as multisystem inflammatory syndrome (MIS-C). COVID-19 has a good prognosis in youngsters, with a fatality

rate of 0.01 percent. There is currently no research describing the intraoral findings in a COVID positive child. COVID-19 affected children have a lower white blood cell count, especially lymphocytes and neutrophils. Thrombocytopenia may occur. Patients who are severely impacted by COVID-19 have high liver enzymes, impaired coagulation, and elevated D-dimers. Chest radiographs of children generally exhibit bilateral patchy airspace consolidations, commonly at the periphery of the lungs, peribronchial thickening and ground-glass opacities.^[5]

SARS-CoV-2 infected children were found to be asymptomatic in 16–45 percent of cases.^[6] Symptom based screening for SARS-CoV-2 is difficult in children due to the lack of characteristic signs or symptoms and a significant proportion of asymptomatic infection.^[7]

With this background, this study aims to assess the knowledge and awareness regarding COVID – 19 among the dental practitioners of West Bengal.

MATERIALS AND METHODS

A. Clearance from the Ethical Committee

The ethical clearance certificate was obtained from the Institutional Ethical Committee of Haldia Institute of Dental Sciences and Research, Haldia, West Bengal.

B. Study design and sample selection

A web based questionnaire survey was conducted for a period of 3 months by preparing google form consisting of 6 questions. It was mandated that all questions be answered. The questionnaire were distributed among 850 dental practitioners in and around Haldia and Kolkata

region through email and social media. Online informed consents were obtained from the participants. They were guaranteed with the anonymity of their responses.

C. Statistical Analysis

The data from the responses were tabulated in Microsoft Excel and analysed with SPSS V.24 (Statistical Package for Social Sciences, IBM Corp., Armonk, NY). The descriptive analysis included the expression of participants' responses to the study questionnaire using frequency and percentage.

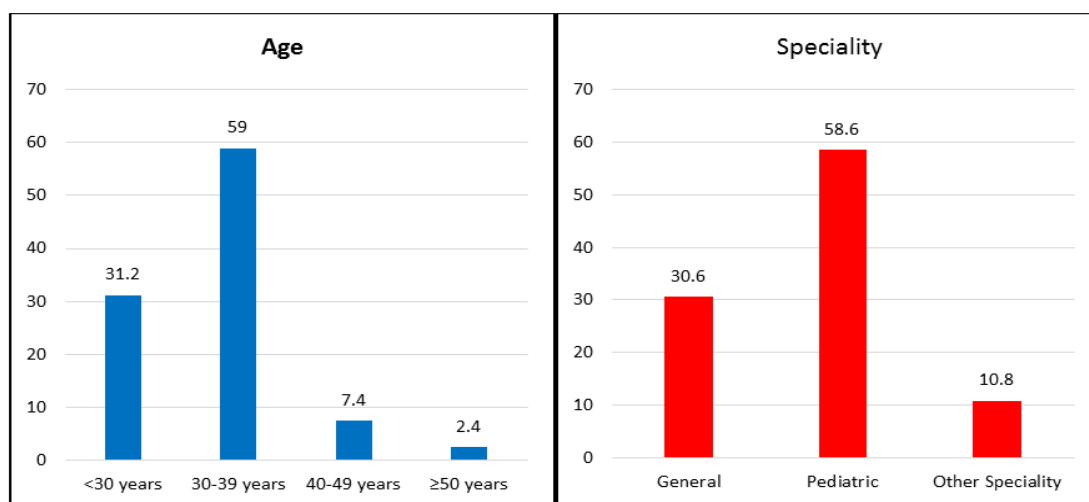
RESULTS

A total of 850 survey questionnaires were distributed. Among them 700 were filled and returned. The background characteristics are given in Table 1 which shows highest proportion of the Dentists (59.0%) were from the age group of 30-39 years. Most of the Dentists (58.6%) were Pediatric Dentists.

A. BACKGROUND CHARACTERISTICS OF DENTISTS WHO PARTICIPATED IN THE SURVEY

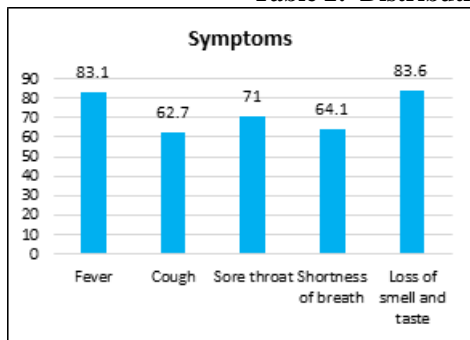
Table 1: Distribution of Dentists' details.

Characteristics		N	%
Age	<30 years	218	31.2
	30-39 years	413	59.0
	40-49 years	52	7.4
	≥50 years	17	2.4
Speciality	General	214	30.6
	Pediatric	410	58.6
	Other Speciality	76	10.8

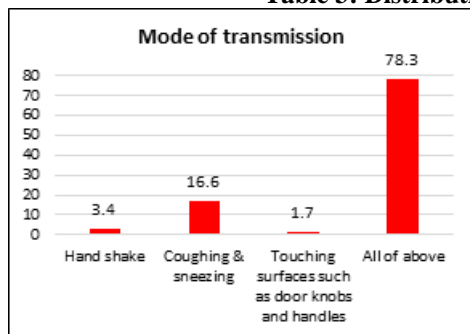


The awareness about the COVID-19 pandemic among the participating dentists are detailed in the Table 2 to Table 5. Most of them stated the common symptom to be loss of smell and taste (83.6%) followed by fever (83.1%), sore throat (71.0%), shortness of breath (64.1%) and cough (62.7%). Majority of the responders (78.3%) stated that the mode of transmission was

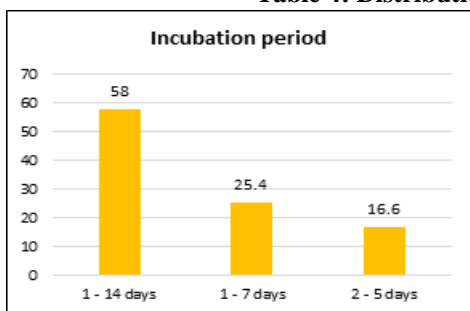
through all of the following- hand shake, coughing & sneezing and touching surfaces such as door knobs and handles. Most of them (58.0%) regarded the incubation period to be 1-14 days. 75.0% of them stated that their sources of information were derived both from social media and health authorities.

B. AWARENESS AMONG DENTISTS REGARDING COVID -19**Table 2: Distribution of responses to the Question 1.**

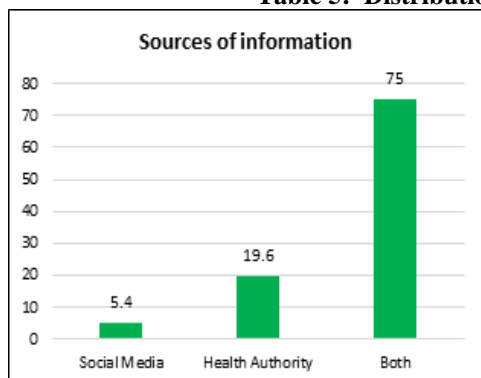
Question	Responses	N	%
Symptoms	Fever	582	83.1
	Cough	439	62.7
	Sore throat	497	71.0
	Shortness of breath	449	64.1
	Loss of smell and taste	585	83.6

Table 3: Distribution of responses to the Question 2.

Question	Responses	N	%
Mode of transmission	Hand shake	24	3.4
	Coughing & sneezing	116	16.6
	Touching surfaces such as door knobs and handles	12	1.7
	All of above	548	78.3

Table 4: Distribution of responses to the Question 3.

Question	Responses	N	%
Incubation period	1 - 14 days	406	58.0
	1 - 7 days	178	25.4
	2 - 5 days	116	16.6

Table 5: Distribution of responses to the Question 4.

Question	Responses	N	%
Sources of information	Social Media	38	5.4
	Health Authority	137	19.6
	Both	525	75.0

DISCUSSION

According to Hoang's recent systematic review, there were 7,780 paediatric patients with COVID-19 infection symptoms in 131 papers published across 26 countries. Fever (59.1%) and cough (55.9%) were the most frequent symptoms found in children but 19.3% of children were carriers without active infection.⁸

Coronavirus disease 2019 has the potential for transmission via respiratory droplets and splatter (aerosol) from saliva and blood of the patients in contact with mucous membranes and infected fomites.^{[9],[10]} This leaves dental professionals in potentially high-risk situations. Young children may not present severe signs of the ailment, but they are nonetheless susceptible to it,

presenting a considerable transmission potential in the community. Given the present uncertain scenario, paediatric dentists providing oral care to children must comprehend current local, regional, and national guidelines and react appropriately to changes to safeguard the safety of dental care providers and patients.^[10,11]

To control the infection in dental practice, guidelines were quickly published for the dental profession by the World Health Organization and Centers for Disease Control and Prevention (CDC) and since then it has been updated on regular basis.^[12,13] Furthermore, some reports provided important information on the signs and symptoms of COVID-19, probable transmission routes, and referral procedures to improve knowledge and preventive practices of dental professionals.^[14,15] The American Academy of Pediatric Dentistry (AAPD) provided monthly updates on its website, including checklists, in the field of paediatric dentistry.^[16] Surprisingly, despite the existence of exceptional disinfection protocols and a positive attitude toward disinfection among oral health practitioners in the face of the COVID-19 epidemic, a recent study revealed a lack of knowledge in dentists about fundamental aspects of disinfection protocols.^[17,18]

The present study investigated the awareness and safety protocols undertaken by dentists regarding COVID – 19 in relation to infant oral health. The results of the study showed that most of the participating dentists were from the age groups of <30 years and 30-39 years. This is similar to the study conducted by Sami Aldhuwayhi et al. (2021) on COVID-19 knowledge and perceptions among dental specialists where the participants were mostly from the age groups of <30 years and 30-39 years (293 out of 396). Another similarity with this study was that most of the participant dentists were pediatric dentists (102 out of 396) in comparison to the other specialties.^[19]

When the awareness was assessed, the results showed that, regarding the symptoms, the commonest response was loss of smell and taste (83.6%) followed by fever (83.1%), sore throat (71.0%), shortness of breath (64.1%) and cough (62.7%). Regarding the transmission, the commonest response was hand shake, coughing, sneezing and touching surfaces such as door knobs and handles (all of them). Regarding the incubation period, most of the participants considered it to be 1-14 days. Most of them stated their sources of information to have been derived both from social media and health authorities. This is similar to the study by Katrin Bekes et al (2021)^[20] where commonest response was shortness of breath (96.6%) followed by cough (94.8%), loss of smell and taste (93.1%), fever (87.9%) and sore throat (60.3%). Most common response about transmission was coughing and sneezing (98.3%) followed by hand shake and touching surfaces (72.4%). When asked about the incubation period, nearly 90% of the dentists correctly answered 1–14 days. Most common response about the

sources of information was Organizations of the Federal Government (86.2%), followed by Austrian Chamber of Dentists (69.0%) and social media (46.6%). Various other studies provided similar reports. Putrino et al reported that 87% of the Italian dentists were already well informed in February/March 2020 about the possible symptoms that appear with the disease, and in 60.9% of the cases, they correctly answered how the new coronavirus is transmitted between persons.^[21] Jordanian dentists were also informed correctly on the mode of transmission and only partly missed COVID-19 symptoms.^[15]

CONCLUSION

The study reveals that the awareness and safety protocols undertaken by dentists regarding COVID – 19 in relation to infant oral health was adequate and up to the mark to prevent the transmission of infection and give best possible treatment. The health authorities and social media played significant role in the spread of knowledge and awareness among the health professionals as well as general public. Further studied in larger scale is recommended to achieve more precise results regarding the long-term implications of COVID-19 on dentists.

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