

**Evaluation of Awareness about Corona Virus Infection among Orthodontist Practitioner in Nagpur City: A Questionnaire Study Form**

<sup>1</sup>Dr. Shefali Gedam, Post Graduate student, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India

<sup>2</sup>Dr. Harish Atram, Reader and Professor, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India

<sup>3</sup>Dr. Pankaj Akhare, Head of the Department and Professor, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India

<sup>4</sup>Dr. Pratik Jaltare, Senior Lecturer, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India

<sup>5</sup>Dr. Kshitij Hemant Sabley, Senior Lecturer, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India

<sup>6</sup>Dr. Akansha Kumar, Senior Lecturer, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India

**Corresponding Author:** Dr. Shefali Gedam, Post Graduate student, Department of Orthodontics and Dentofacial Orthopaedics, Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur, Maharashtra, India.

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**Abstract**

**Background:** Corona virus is striking remarkably all over the nations and now its pandemic. This is really alarming sign for all of us. Infection prevention and control measures are critical to prevent the spread of this lethal virus. Therefore Orthodontist professionals should be aware of all procedures concerning prevention and protection of Coronavirus.

**Objective:** The aim of the present study is to improve the knowledge of the Orthodontist practitioner and evaluate their awareness about coronavirus infection.

**Material and methods:** A questionnaire study was assessed through email to 200 Orthodontist practitioner to evaluate their knowledge about Coronavirus infection.

**Result:** 98.5% were aware about the etiology, symptoms of the coronavirus infection. 86.8% were aware of the precautions before handling any patient with coronavirus

infection. Only 56.7% were aware about the source of the infection. Similarly 74.6% were aware of the infection associated with different parts of the country.

**Conclusion:** Orthodontist practitioner in Nagpur city had good knowledge about Coronavirus infection. However more information is needed to intensify the awareness and mental health issue of Orthodontist practitioner during this pandemic.

**Keywords :** Awareness, coronavirus, virus infection, orthodontist practitioner, etiology, contamination

### Introduction

Covid -19 are large enveloped single stranded RNA virus emerged in humans, striking remarkably all over the nation and its highly transmissible<sup>1,2</sup>. Due to increased rate of covid-19 infection throughout the world, on 12<sup>th</sup> March, 2020, it is declared as National Emergency by the World Health Organization<sup>3</sup>. They are of two types Severe Acute respiratory syndrome (SARS) and Middle east respiratory syndrome (MERS)<sup>4</sup>. The symptoms of these virus are very much similar to common cold (229E and OC43), upper airway infection ( NL63) nonrespiratory infection, and that's why become unnoticed by all<sup>5,6,7,8</sup>

An evidence have been reported that these lethal virus are present at highest rate in human saliva<sup>9</sup>. Risk of transmission through animals<sup>10,11,12</sup> and distant transmission from contaminated environmental surfaces including fomites and air borne transmission are also been reported<sup>13</sup>. Mental health and psychosocial consideration of the victim patients and treating doctor plays a very crucial role<sup>14</sup>. Many orthodontist practitioners still today are unaware of the intensity of this deadly virus and running the clinic without any precautionary measures<sup>15,16</sup>. The knowledge about this deadly virus, its etiology, transmission and intensity amongst orthodontist are still questionable globally<sup>17</sup>. The awareness about importance of reducing this pathogenic infection need to be increased

among medical faculty<sup>18</sup>. This is really an alarming sign for all of us. We need to take effective precautionary measures including contact control, hand hygiene, disinfection and environment cleaning to restrict this lethal virus<sup>19,20,21</sup>. There is also a pressing need to identify the areas where improvements can be made in hospital setup towards infection control practices<sup>22</sup>. Therefore aim of this study is to evaluate awareness among orthodontist practitioner in Nagpur city about coronavirus infection : a questionnaire based survey.

### Material And Method

This is cross-sectional, observational study was carried out in Central India. The required data for conducting the study was collected and recorded using a printed questionnaire Performa and working e-mails of orthodontist practitioner to take survey, a set of questions appeared sequentially, which the participants were to answer.

It was the online questionnaire based study. 200 Participants with access to the internet could participate in the study. Participants who are practising orthodontist and the postgraduate orthodontist students from central india were included in the study.

The online self reported questionnaire developed by the investigators contained the questions related to awareness, knowledge, attitude about the coronavirus infection during the pandemic.

There were 15 multiple question included in the study relating to etiology, symptoms and precaution based question were assessed. Descriptive statistics have been used in the study to analyse the findings. Mean, standard deviation and proportions have been used to estimate the results of the study.

### Questions Included Were

- 1) What is scientific name of Corona virus?
  - a) covid 19

- b) H1N1
- 2) Are you aware what is Corona virus?
- a) YES
- b) NO
- 3) Have you acquired any patient associated with symptoms related to Corona virus in your dental practice ?
- a) YES
- b) NO
- 4) Is Corona virus infectious ?
- a) YES
- b) NO
- 5) Is there any vaccine to cure Corona virus ?
- a) YES
- b) NO
- 6) At what distance does Corona virus carrier affect the individual ?
- a) 6 feet
- b) 2 feet
- 7) What precaution a dentist must take before handling any patient associated with Corona virus ?
- a) -Washing cloth and mop heads, keeping doors and windows open, cleaning hard surface with hot water
- b) -Clothing and mop head disposed off, use of disposable cloths and mop heads, keeping door closed with windows open, disinfecting hard surfaces
- 8) Can Corona virus be confirmed by laboratory diagnosis?
- a) YES
- b) NO
- 9) Do you think the people from all over Health services are more prone to Corona virus ? (mainly Health care Professionals)
- a) Yes
- b) No
- 10) From where do you hear about Corona virus ?
- a) Social media
- b) Friends
- 11) Do you know the types of Corona virus?
- a) Yes
- b) No
- 12) What is the incubation period of Corona virus ?
- a) 7 days
- b) 14 days
- 13) Is Corona virus endemic or pandemic in nature ?
- a) Endemic
- b) Pandemic
- 14) What is the main source of infection for Corona virus ?
- a) Bats
- b) Humans
- 15) What is the fatality rate of Corona virus associated patients in different countries ?
- a) China - 3%
- b) Iran - 9%

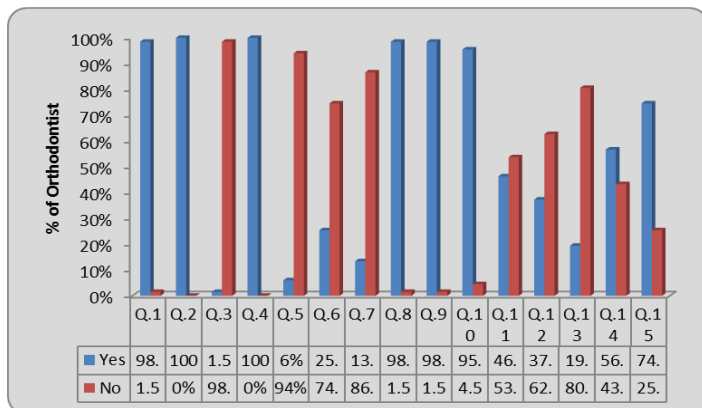
### Statistical analysis

Comparison of responses of 200 orthodontics in Nagpur

Question	Yes	No	z-value	p-value
Q.1	98.5	1.5	81.03	Significant
Q.2	100	0	100	Significant
Q.3	1.5	98.5	1.23	Significant
Q.4	100	0	100	Significant
Q.5	6	94	2.53	Significant
Q.6	25.4	74.6	5.84	Significant
Q.7	13.4	86.6	3.93	Significant
Q.8	98.5	1.5	81.03	Significant
Q.9	98.5	1.5	81.03	Significant
Q.10	95.5	4.5	46.07	Significant

Q.11	46.3	53.7	9.29	Significant
Q.12	37.3	62.7	7.71	Significant
Q.13	19.4	80.6	4.91	Significant
Q.14	56.7	43.3	11.44	Significant
Q.15	74.6	25.4	17.14	Significant

If  $Z > 1.96$ , Result is significant



Statistical analysis was done by using descriptive and inferential statistics using z-test for single proportion and software used in the analysis was GraphPad Prism 7.0 version and  $z > 1.96$  is considered as significant.

### Result

A total of 250 questionnaire response were recorded through online survey. Out of which 200 corresponded to the questionnaire study. The study included only those participants who are orthodontist practitioner or orthodontist postgraduate students. Among the participants, 98.5% were aware about the etiology, symptoms of the coronavirus infection. 86.8% were aware of the precautions before handling any patient with coronavirus infection. Only 56.7% were aware about the source of the infection. similarly 74.6% were aware of the infection associated with different parts of the country.

### Discussion

The coronavirus has suspected to continue its spread in all parts of the world. It is the serious challenge for all health care worker. Dentist profession is at highest risk to exposure from patients, and exposure to blood and saliva

during treatment. The present study has described the knowledge and awareness of coronavirus infection among orthodontists practitioner and orthodontist post graduate students. The result of the present study , though could be called as satisfactory, has highlighted a need for enhancement of knowledge and awareness among orthodontist pratitioners. The result of the present study was similar to that of Alamutairi manali, which was conducted among dental students in Riyadh, Saudi Arabia. The majority of the orthodontic practitioner were aware about the coronavirus infection, their etiology, symptoms and methods of preventions which indicates that the information related to contamination and spread of coronavirus infection and protection was well known among the study sample. The coronavirus infection prevention and control measures for managing coronavirus infection are well documentation

It is crucial to provide health education and create awareness during such highly infectious virus. It has been seen in the previous study that the health professionals often have better awareness and has positive attitude towards pandemic. Massive efforts from all the concerned quarters are underwent to educate protect the general health and health care worker from coronavirus infection. There is a need to continue the efforts to educate professionals with full enthusiasm. It is to hoped that the present study has provided useful information that can be utilized in preserving the knowledge about coronavirus infection to the health care professionals.

### Conclusion

Coronavirus infection is an emerging infectious disease of probable animal origin. Sustained human to human infection has its potential for widespread of this deadly infection. Vigilance , early recongnition, and institution of appropriate protective measures like hand hygiene,

wearing personal protective equipments and social distancing are the most effective control measures.

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