



Original Research Article

How prepared were we? A study to assess the knowledge, attitude and practice of dental surgeons regarding the Covid 19 pandemic in district Dehradun

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ABSTRACT

Background: The novel corona virus disease 2019 has been declared a global public health emergency & is affecting people across the globe. Dental Surgeons are at an invariably high risk of contracting COVID 19. Since all dentists are slowly resuming their full practice they shall be fully prepared.

Objective: Aim of the study is to assess the knowledge, attitude & practise of Dental Surgeons regarding the novel Corona Virus Disease 2019 in District, Dehradun.

Materials and Methods: An online Questionnaire was circulated among dental surgeons in District, Dehradun. The Questionnaire consisted of 5 sections: 1. Consent, 2. Epidemiological Data, 3. Knowledge Based Questions (11 Questions), 4. Attitude Based Questions (8 Questions), 5. Practice Based Questions (11 Questions).

Results: 107 responses were collected in total. Most dental surgeons had a degree of MDS (Masters of Dental Science): 60.7%. Good knowledge and practice scores were observed among 92.7% and 79.5% of the dental surgeons. Significant association of good knowledge scores with qualifications ($p = 0.04$) and years of practice ($p = 0.02$) was found; while good practice scores were associated with qualifications only ($p = 0.03$).

Conclusion: Dental surgeons in district Dehradun were found to have good knowledge and practice scores, which is important to skirmish COVID-19. They are hence advised to follow the Center of Disease Control and Prevention (CDC) World Health Organization (WHO), Ministry of Health & Family Welfare (MoHFW) guidelines in their clinics and should sensitize their staff as well. So that they themselves, their staff and patients all remain safe.

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1. Introduction

30th January 2020 was the day on which the World Health Organization (WHO) declared a global public health emergency against the outbreak of coronavirus disease which was termed as COVID-19 (Coronavirus Disease 2019). Since then, it has rapidly achieved a pandemic status and has been creating a havoc around the globe.¹

The causative organism liable for this outbreak was called as the Severe Acute Respiratory Syndrome

Coronavirus 2 (SARS-CoV-2) earlier as a similar disease known as Severe Acute Respiratory Syndrome was caused earlier by a similar organism. The organism belongs to the family Coronaviridae of the order Nidovirales. This virus structurally comprises of a large, single, plus-stranded RNA as its genome.^{2,3}

Those suffering from this disease clinically present with the primary symptoms like fever, cough, myalgia and severe respiratory distress, whereas less common symptoms include sputum production, headache, hemoptysis, and diarrhea.³⁻⁵ Earlier, it was considered to have a zoonotic route of transmission; however, a now a person-to-person

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route of transmission through direct contact and droplets has caused the disease to spread rapidly across different continents.^{3,6}

In a dental setting, as the dentist is in close proximity to the patient and his oral cavity, the chance of acquiring infection through micro-droplets from an infected patient is elevated and the risk of cross-transmission is certainly high.

In developing countries like ours who are tourist friendly too there is a boom of dental tourism due to the availability of quality treatment at affordable prices, which attracts patients from all over the globe.⁷ In the event of an outbreak, the dentist can be the first person to come in contact with an infected person; they can either unknowingly become a carrier and infect others. Or by following proper guidelines they can prevent the possible spread of the disease and save the whole community from the catastrophic effects.

For combating an outbreak, dentists should be aware of recent guidelines, especially those related to public health & dental treatment and patient management protocols. They shall make efforts to prevent the transmission of COVID 19 and other such diseases. Hence, the present study was undertaken with the aim to assess the Knowledge, Attitudes and Practices (KAP) of dental surgeons in district Dehradun regarding the pandemic of COVID-19.

2. Materials and Methods

2.1. Study population

The study was conducted among dental surgeons practising in Dehradun District. District Dehradun consists of 3 sub categories: Dehradun, Mussorie, Rishikesh. With Areas namely Chakrata, Clement Town, Dehradun Cantonment, Doiwala, FRI, Herbetpur, Khalsi, Landour, Mussorie, Pratitnagar, Raipur, Rajpur, Rishikesh, Sudhowla, Tehri Visthapit, Vikasnagar, Virbhadra. So dental surgeons practicing any where among these places were included. The data was collected online through Google forms and is available at <http://forms.gle/3LcFccTkycoUR57e8>. Upon clicking on the link our first page assured the confidentiality of data, informed the dentists of the study objectives and also stated that the study participation was completely voluntary. The dentists' consent to participate in the study (inclusion criteria) was implied when they clicked on the 'I am willing to participate option' and then the 'NEXT' button of the questionnaire which led them to the next page from where questions started. They had complete freedom either to decline or answer the questionnaire. Only the principal investigator had access to the data. Responses were sought from only those dentists who at least had completed their graduation in dentistry and a submission was considered only when the 'submit' button was clicked at the end of the questionnaire (inclusion criteria).

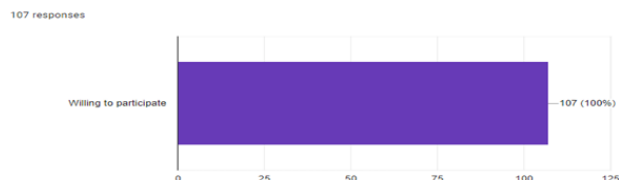


Fig. 1:

3. Study instrument

The questionnaire was approved by the Institutional Ethics Committee of Seema Dental College & Hospital Rishikesh. The duration of the survey was 15th June 2020- 15th August 2020. The questionnaire was circulated among dentists from Dehradun district via whatsapp, whatsapp groups, facebook groups, college & hospital groups etc.

The questionnaire consists of 4 parts:

1. Epidemiological data: which consisted of name, age, present place of practice (Private Dental Clinic, Hospital, Government Job, Other), City/Town of Practice, highest qualification, Practicing as (Clinician, Academician, Both, Post Graduate Student), Years of Practice.
2. Knowledge Based Questions: 11 questions
3. Attitude Based Questions: 8 questions
4. Practice Based Questions: 11 questions

3.1. Distribution of demographic parameters

A total of 107 responses were collected and all 107 submitted the full form. Respondents were of varying age groups, but maximum 12.1% were between the age group of 26-28.

43.9% of them were practicing at a hospital, 29.9% at a private dental clinic, 3% had a government job. The maximum inputs were from dental Surgeons practicing in the City of Rishikesh (48%) and Dehradun (9.4%). 60.7% of the respondents were MDS. 29.9% were clinicians while 28% were post graduate students & 29.1% worked as academicians & clinicians both. 30.2% had an experience between 0-2 years while same 30.2% had an experience of more than 10 years and the rest 24.5% & 15.1% had an experience of 2-5 years & 5-10 years respectively.

3.2. Distribution of the level of knowledge

Regarding q.1 46.7% people have thoughts that there were no similar corona virus caused diseases in the past, 7.5% were not sure and 45.8% have the knowledge of other corona virus caused diseases in the past.

100% knowledge about the symptoms of COVID-19 was present among the respondents.

68.6% of respondents knew about the testing mode to be RTPCR. 100% knowledge was found among the

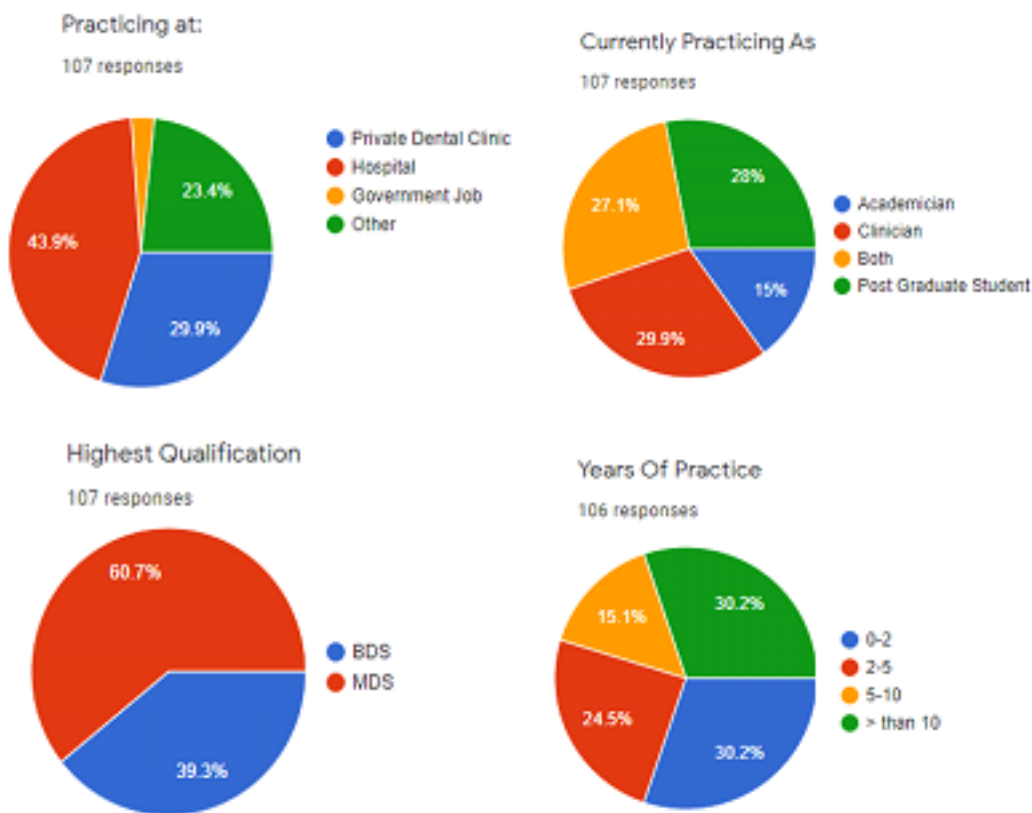


Fig. 2:

respondents for the mode of transmission of COVID 19 to be mainly via respiratory droplets.

95.3% of the respondents are of the opinion that currently there is no effective cure for COVID 19.

70.1% are of the opinion that not all patients suffering from covid19 would develop serious conditions & die, while 25.2% think so while 4.7% were not sure.

95.3% believe that wearing a mouthmask could protect them from COVID 19, 3.7% don't think so and 0.9% are not sure.

87.7% have the knowledge that both sick and healthy shall be wearing a mask according to the current scenario.

98.1% respondents know that Isolation & treatment of the patients affected could be a way to stop further spread of COVID 19.

100% of the respondents are of the opinion that people who have had any contact with a COVID 19 positive person shall be quarantined immediately.

3.3. Distribution of attitude

100% of the respondents were avoiding going to public places, until necessary.

99% of the respondents believe that it is possible for a Dental Surgeon to spread awareness regarding COVID 19

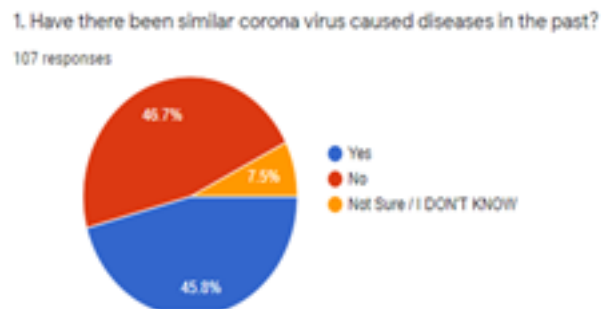


Fig. 3:

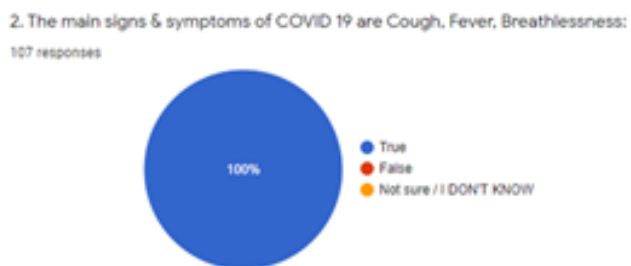


Fig. 4:

4. What is the method used for diagnosing COVID 19?

105 responses

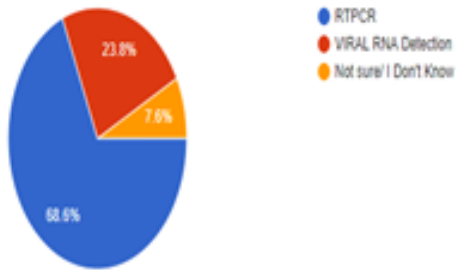


Fig. 5:

5. COVID 19 can spread mainly via?

107 responses

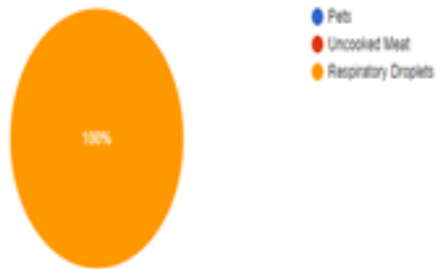


Fig. 6:

6. There is currently no effective cure for COVID 19

107 responses

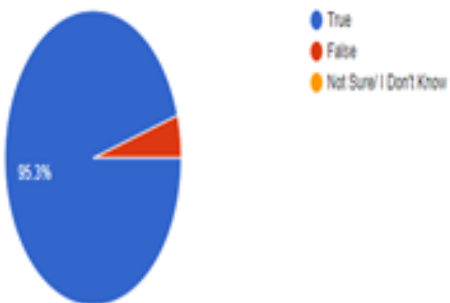


Fig. 7:

7. Persons infected with COVID 19 will develop to a serious case & eventually die?

107 responses

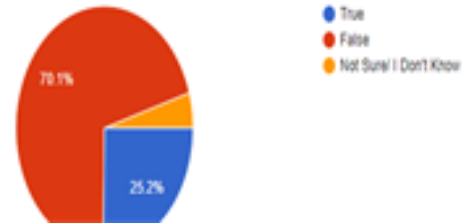


Fig. 8:

8. Can Wearing a Mouth Mask Protect you from COVID 19?

107 responses

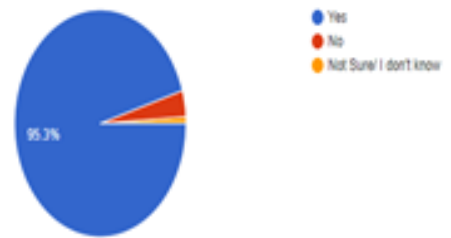


Fig. 9:

9. If Yes on Q.8, Then who shall be wearing it?

106 responses

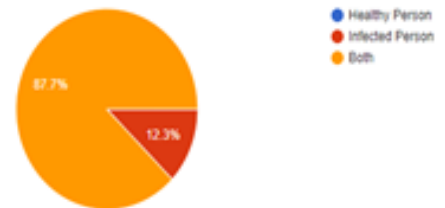


Fig. 10:

10. Isolation & Treatment of people who are infected with COVID 19 are effective ways to stop the spread of the virus?

106 responses

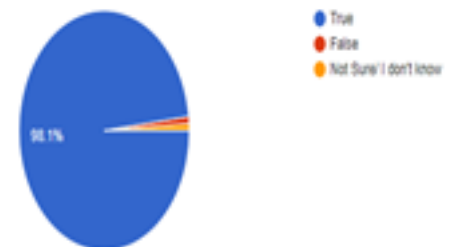


Fig. 11:

11. People who have had any contact with an infected COVID 19 Patient should be isolated/quarantined immediately as well? In General the observation period being 14days?
107 responses



Fig. 12:

13. Is it possible for a dentist to spread awareness about the novel corona virus disease 2019?
107 responses



Fig. 14:

among the masses, while 1% differed from this opinion.

51.9% of the respondents believe that it is possible for them to practice now, while 48.1% believe that in the current circumstances it is unfavourable for them to return to their clinical practice.

87.9% think a PPE KIT, proper handwashing, other precautions can save them from getting infected, while 12.1% don't think so.

93.5% of the respondents are of the opinion that COVID 19 is a risk to their health while the other 6.5% don't believe so.

95.3% believe that COVID 19 could be a risk to their patients while 4.7% don't believe so.

71% believe that COVID19 can be successfully controlled, while 29% don't believe so.

71% don't believe that the government measures are sufficient enough to stop the spread of COVID 19, while 29% believe that they are sufficient.

12. Are you avoiding going out to public places unless something really important?
107 responses



Fig. 13:

14. Do you think in such circumstances it is possible for you to practice?
106 responses

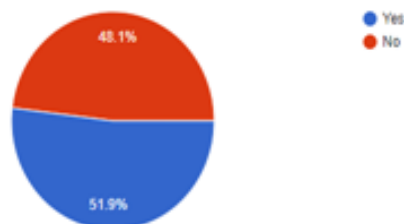


Fig. 15:

15. Do you think a PPE KIT, proper handwashing, other precautions can save you from getting infected?
107 responses



Fig. 16:

16. Do you think COVID 19 is a risk to your health?
107 responses

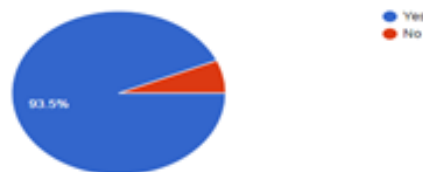


Fig. 17:

3.4. Distribution of practice based parameters

96.2% of the respondent dental surgeons had added travel history to their history taking format for each patient.

94.3% claimed that their dental staff has been sensitized about the WHO Preventive Measures of COVID 19.

17. Do you think COVID 19 is a risk to your patients health?
107 responses



Fig. 18:

20. Have you added Travel history to your "History taking " of the patient?
106 responses



Fig. 20:

18. Do you agree that COVID 19 can be successfully controlled?
107 responses

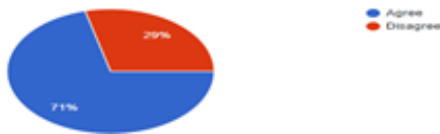


Fig. 19:

21. Has your dental staff been sensitized about the WHO Preventive Measures of COVID 19?
106 responses

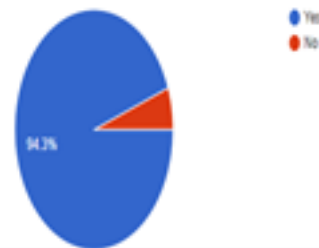


Fig. 21:

95.3% of respondent dental surgeons had started symptomatic screening like thermal screening, pulse oximeter for each patient before each appointment.

93.4% claim to have discussed the risk of COVID 19 with their patients

89.7% of the respondents said that COVID 19 has had an effect on their practice, while 6.5% weren't sure about it, while 3.7% said that it has had no effect on their dental practice.

98.1% said that COVID 19 has had an impact on their social life.

100% of the respondents believe that COVID 19 has had an effect on their daily routines.

76.6% claim to have tried in spreading awareness about COVID 19 through a social platform. Out of which 48.8% say that they have done it verbally, 42.7% have done it using Visual Aids & 28% through audio visual aids.

99.1% believe that all including avoiding contact with infected patients, always wearing a mouth mask while contacting any patient, using eye protection like Googles/ face shields while performing any clinical procedure, Hand washing with soap & water before & after doing any patient would act as a preventive measure for them against COVID 19.

22. Have you started doing a symptomatic assessment of the patient first before starting any procedure with him?
106 responses

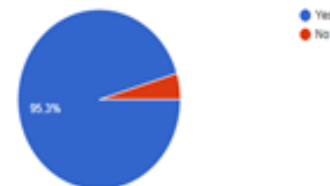


Fig. 22:

23. Have you discussed the risk of COVID 19 with any of your patients?
106 responses

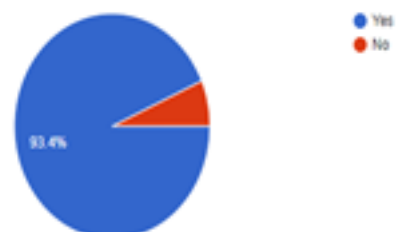


Fig. 23:

4. Discussion

COVID 19 is a major health concern globally and in India presently. Dental Practitioners working at hospitals, private or public dental clinics were attending to only emergency cases earlier, but now mostly all of them are back to their practice. Practicing dentistry at the time of a pandemic is a first time experience for all dentists mostly and hence we



Fig. 24:

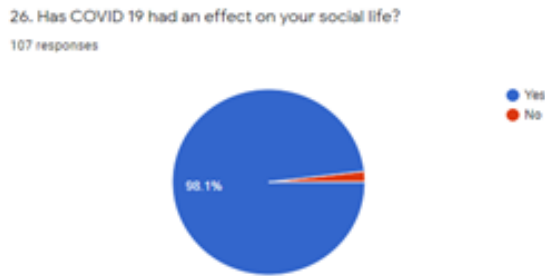


Fig. 25:



Fig. 26:



Fig. 27:

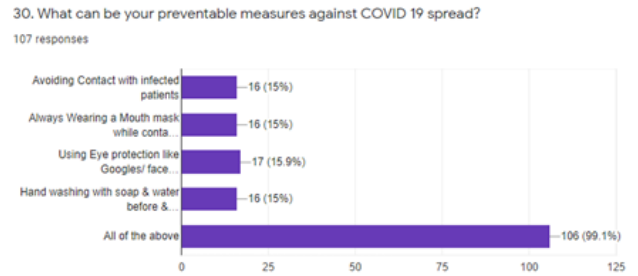


Fig. 28:

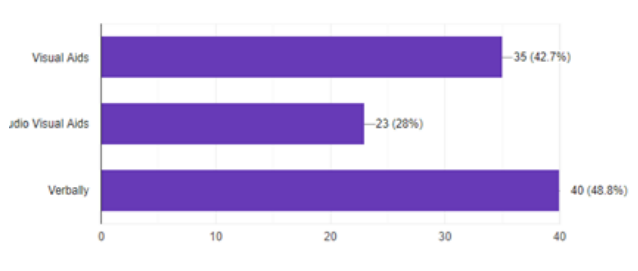


Fig. 29:

wanted to know about their preparedness. The possibility of transmission is high in dentistry and the routes of transmission can be face-to-face via talking, diagnosing or treating through droplets, contact with saliva, blood and other body fluids, surface contamination etc.

Majority (85%) respondents had a good knowledge (75-80%) and maximum were those consisting of a post graduation in their highest qualification.

Most of the respondents were aware about the wide variety of the symptoms that the patient can present at clinic which is of utmost importance for the early diagnosis of the suspected positive patients. The asymptomatic carriers on the other hand could pose the real issue as they have no or very mild symptoms which can be coincided with other viral infections. Thus the dental surgeons shall consider each patient in their clinic to be a COVID-19 positive and hence they should take all the necessary precautions. Regarding the mode of transmission of COVID 19 nearly all respondents had a fair knowledge that means the dentist knows how to prevent the community spread of the current pandemic.

Only 46.1% of the respondents knew about the various types of coronaviruses.

About 50% of the respondents perceived COVID-19 as dangerous. Which could be correlated to the fact that almost the same number of participants feel that 80% of the patients can present with mild or no symptoms.^{4,26} These patients pose the highest risk as these almost asymptomatic ones can not only act as carriers of infection to others but also can also cause reinfection unintentionally.

5. Limitations

In spite of our best efforts the study was prone to a few limitations like: the short time duration of the survey, the smaller than expected size of the sample and since the data collection was done through social media it could have excluded many practitioners who were not using social media due to any personal reasons or their busy schedules.

6. Conclusion

From this study, I can conclude by saying that dental surgeons from the state of Uttarakhand have found to have good knowledge about COVID 19.

Dental Surgeons were found to obtain good knowledge and practice scores, which is important to combat COVID-19. All Dental surgeons should appropriately use their social media to spread awareness among people. Also in their clinical practice, they should screen, isolate and refer the potential cases having the symptoms of COVID-19. We advise them to follow the CDC and WHO guide-lines at their clinics and to also sensitize their staff so that no stone is left unturned in defeating this pandemic.

Despite of having adequate level of knowledge and risk perception, dental practitioners around the country were in a state of anxiety and stress about working in their field. For improving the knowledge and awareness of best and most recent practices and approaches for infection control we advise all dental surgeons to attend COVID 19 training programs regularly.

7. Source of Funding

None.

8. Conflict of Interest

None.


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