

ORIGINAL ARTICLE

KNOWLEDGE, AWARENESS, ATTITUDE AND PRACTICE CONCERNS ABOUT COVID PREVENTION AMONG CLOVE DOCTORS IN INDIA: A QUESTIONNAIRE SURVEY

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ABSTRACT

Objectives: To ascertain the knowledge and awareness amongst dentists working in Clove Dental about the COVID19 disease, their readiness to work in clinics, precautions being undertaken by them in the clinics, measures for safety of patients as well as their own safety and to assess the information level and the attitude of doctors during this pandemic towards COVID-19 safety protocols and various guidelines.

Materials & Methods: The current Questionnaire Survey using Google platform consisted of 35 questions, which included 5 questions corresponding to baseline data of the study participants and the remaining 30 questions focussed on various aspects of awareness, safety and prevention protocols of doctors, dental assistants and patients. Questions were framed keeping in mind that all participants were working in the same organisation and they could send their replies incognito. The survey was conducted when the COVID19 scare was at its peak (Apr-May 2020) and the awareness about the disease was developing. Further, the fear factor amongst the dentists to return to work was the greatest. Google Forms for surveys was considered as the preferred tool because these forms have been considered to be an easy method to collect data within short span of time which comes partly collated to you for further computing especially where the sample is being collected from 27 cities in the country. Google Form links of the questionnaire were

shared with all the 950 doctors working in 350 Dental Clinics in 27 locations across the country.

Results: A total of 406 Clove Doctors responded in the study. Almost 100% strict sterilization and sanitization was reported with awareness and updated knowledge regarding COVID-19, asepsis and sterilization among doctors. More than 99% respondents answered 'Yes' to questions like; Are you updated with the latest Guidelines on Infection Control regarding COVID-19, training on COVID-19 guidelines by Clove Dental has proved to be useful, Carrying out assessment on COVID guidelines was a good idea and awareness that dental surgeon has complete right to defer patient's treatment. Further, 97% dentists responded that Standard Operating Protocols (SOPs) were being strictly followed by everyone including PPE kits, personal & travel history record, temperature and SpO₂ measurements.

Conclusion: Doctors in Clove Dental were found to be aware of the latest guidelines and also updated in protocols pertaining to safety and prevention. Doctor's placed their faith in the actions undertaken for their safety and the safety of their patients. Doctors were also confident of working in clove clinics after they were trained and when they witnessed that the updated armamentarium is available at all functional Clove clinics to guarantee the safety and protection of the patients, doctors, dental assistants and staff.

Keywords: COVID-19, Awareness, Information, Protection, Prevention, Safety, Doctors, Willingness to return to work, New safety armamentarium, Clove Dental

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INTRODUCTION

The SARS-COV-2 pandemic has created an extremely difficult situation all over the world. The World Health Organization has declared it a global emergency. The report counts of diseased has crossed the 10 million mark and over half a million deaths occurred.¹ Lock down, Social Distancing, Hand Sanitizing, Wearing of Masks and Gloves are such protocols which have become the new-normal around the world, which were never seen before in such a manner. COVID-19 is a droplet infection caused by direct contact with the

affected individual or indirectly by coughing, sneezing and infected surface exposure.² In 2 to 14 days after exposure; the symptoms appear and may worsen. Common symptoms include fever, cough, shortness of breath or breathlessness, body aches, sore throat, diarrhoea and vomiting.³ Immunocompromised people have a higher mortality rate in comparison to healthy individuals.⁴ It has created such an extreme fear in the minds of the general public that they don't want to move out of their houses, specifically when it comes to dental treatment, as dental procedures may produce virus containing aerosols.⁵ In such a scenario, standard operating protocols, safety and preventive measures issued by various stakeholders around the world are very important for the prevention and containment of this deadly virus. Clove Dental being the World's 5th largest and Asia's Biggest Dental Chain with 350+ clinics in 27 cities and 950+ doctors across India, is following all protocols issued by the government & other important organizations for the safety and wellbeing of patients, doctors and other health care workers in the clinics and hospitals. This questionnaire-based survey was thus planned to ascertain the safety of doctors at Clove Dental and to assess the compliance of COVID-19 protocols issued by Clove Dental and to gauge the penetration of the information relating to safety standards and to gauge its compliance across the country.

MATERIALS AND METHODS

A questionnaire survey was undertaken with the help of Google Forms consisting of 35 questions. Links to the questionnaire were shared to all the 950+ doctors in Clove Dental. 5 questions corresponded to the baseline data of the doctors and rest 30 questions were based on Safety, Prevention, awareness and other protocols and guidelines Issued by the organization. The questionnaire also puts light on the knowledge, attitude, fear and awareness of COVID-19 among Clove doctors. It was a voluntary closed ended questionnaire survey with 2 possible responses to choose from. All questions were not compulsory. For every question, there was variant

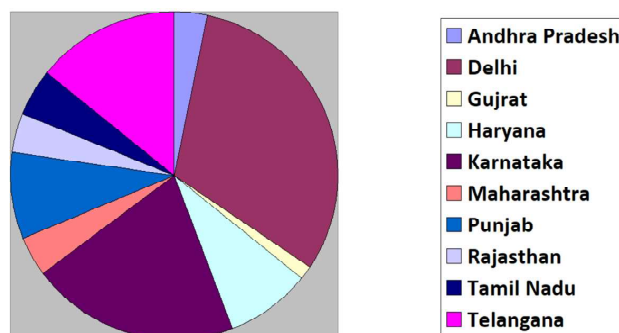


Fig 1: Data of participants across country

participation with a maximum of 406 doctors and a minimum of 333 doctors around India. (Figure 1) Data was collected in an Excel sheet and extracted in tabular form. The result compilation was based on descriptive statistical analysis using percentage-based inference.

OBSERVATION

Unprecedented 'YES Response' i.e. above 99% participants was seen to following questions, which literally laid the foundation of confirmation of providing care of the highest quality by dentists at this facility across the country.

- Are you updated with the latest Ministry of Health, IDA, World Health Organization (WHO) Guidelines on Infection Control regarding COVID-19?
- Do you feel that the training on COVID-19 guidelines by Clove Dental has proved to be useful?
- Do you feel that making it mandatory for all doctors and dental assistants to pass the COVID-19 guidelines information by Assessment was a good idea?
- Are you aware that dental surgeon has complete right to defer patient's treatment, if the patient is showing suspicious symptoms of COVID-19?
- Do you feel strongly that patients will be returning for treatments soon when they see such thorough precautionary measures?

RESULTS

Response rate of this questionnaire varied from 35.5% to 42.7%. On assessment of practice among 406 participants, 176 (43.4%) had joined duties and 230

Table 1: Data & Result of Questionnaire on Performing Practice among Doctors

S.No	Questions	Participants	Yes	%	No	%
1.	Have you joined your duties post COVID - 19 at Clove clinic?	406	176	43.4	230	56.6
2.	Has your base clinic opened for patients?	406	192	47.3	214	52.7

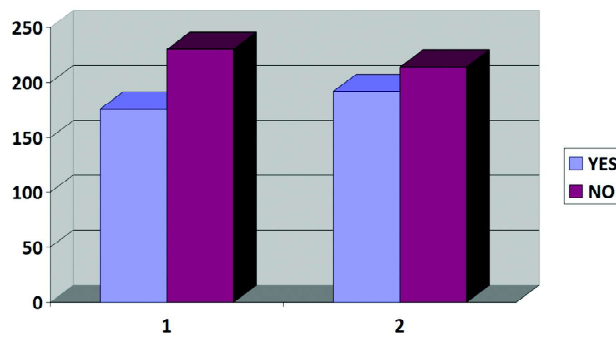


Fig 2: Graphical representations on response of questionnaire on performing practice among doctors

(56.6%) had not. The main reason for this was the government lock down regulations in the country, which made Clove Dental to open the clinics based on patient's priority. Only 192 (47.3%) doctors were attending their clinics and 214 (52.7%) could not. (Table 1 & Figure

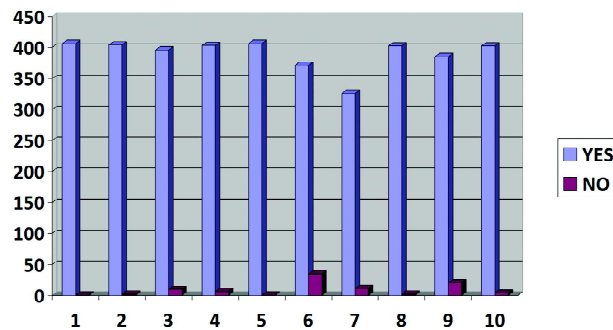
2) When knowledge and awareness was assessed there was 100% up gradation of knowledge and protocols laid down by the Ministry of Health, Government of India, Indian Council of Medical Research (ICMR), Indian Dental Association (IDA), World Health Organization (WHO). Based on the guidelines issued by various statutory bodies, Clove Dental formulated their own Guidelines on Infection Control regarding COVID-19 and carried out extensive training among the Clove doctors and dental assistants. Passing the assessment was kept as the pre-requisite by the Clove Dental before the Doctor could return to active duty. 91% of the Dental Assistants underwent training on COVID-19 guidelines by Clove Doctors. 95.3% doctors kept a daily track of their Dental Assistant's health, travel & medical history. 96.7% Dental Assistants stringently followed the safety protocols and guidelines for COVID19 prevention at the clinic. 94.8% doctors had updated knowledge on whom

Table 2: Data & Result of Questionnaire on Knowledge and Awareness among Doctors

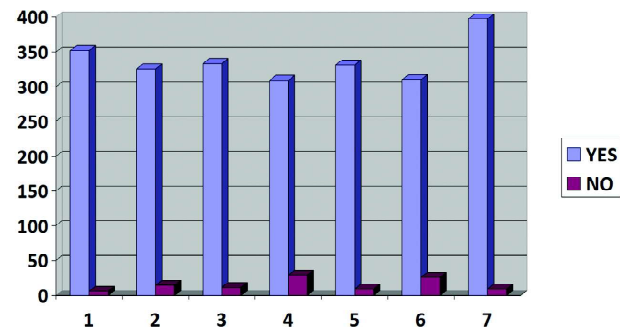
S.No	Questions	Participants	Yes	%	No	%
1.	Are you keeping abreast of latest literature on COVID-19 and fully aware of precautions to be taken during dental treatment?	406	406	100	0	0
2.	Are you updated with the latest Ministry of Health, IDA, WHO Guidelines on Infection Control regarding COVID-19?	406	404	99.5	2	0.5
3.	Do you feel that Clove Guidelines are complete in all respects and ensure safety for all?	406	396	97.5	10	2.5
4.	Do you feel that the training on COVID-19 guidelines by Clove Dental has proved to be useful?	406	403	99.3	6	1.7
5.	Do you feel that making it mandatory for all doctors and dental assistants to pass the COVID-19 guidelines information by Assessment was a good idea?	406	406	100	0	0
6.	Has your Dental Assistant undergone training on COVID-19 guidelines by Clove Doctors?	406	371	91.4	35	8.6
7.	Is your Dental Assistant stringently following the safety protocols and guidelines for COVID19 prevention at clinic?	337	326	96.7	11	3.3
8.	Are you aware that dental surgeon has complete right to defer patient's treatment, if the patient is showing suspicious symptoms of COVID-19?	406	404	99.5	2	0.5
9.	Do you know whom to refer the patient or whom to Contact if you come across a patient with suspected COVID-19 symptoms?	406	385	94.8	21	5.2
10.	Do you feel strongly that patients will be returning for treatments soon when they see such thorough precautionary measures?	406	402	99	4	1

Table 3: Data & Result of Questionnaire on Maintaining Sterilization & Following Guidelines among Doctors

S.No	Questions	Participants	Yes	%	No	%
1.	Are you ensuring Clove trade mark 4-step sterilization of all instruments at your clinic?	358	352	98.6	6	1.4
2.	Complete PPE kit is being given to each patient at clinic which includes Mask, Cap, Gloves, Foot cover etc.?	340	326	95.9	14	4.1
3.	Maintaining the hand hygiene of all patients at clinic by giving hand disinfectant is being followed?	344	333	96.8	11	3.2
4.	Is the hard surface disinfection, Surgery sterilization and Asepto done in front of the patient?	338	309	91.4	29	8.6
5.	All patients rinse their Mouth with Povidone Iodine before Treatment?	340	331	97.4	9	2.6
6.	Disinfectant solution like H ₂ O ₂ or Chlorine being added in the Water Bottle of dental unit for Air rotor spray use?	335	310	92.5	26	7.5
7.	With Aerosol Extraction Units and new age Fumigators being installed in each Clove clinic; do you feel highest safety for the dentists and the patients?	406	397	97.8	9	2.2

**Fig 3: Graphical Representations On Response On Knowledge And Awareness Among Doctors**

to refer the patient or whom to contact, if they ever came across a patient with suspected COVID-19 symptoms. 97.2% doctors were using PPE for every patient as per protocol. Most importantly, 99% of doctors after working in a CLOVE COVID-19 protected environment felt and experienced strongly that patients were returning for treatments when they see such stringent precautionary measures for the prevention of COVID-19 at Clove's clinics. (Table 2 & Figure 3) When assessment of sterilization protocol and guidelines followed was performed; 98.6% of the doctors reported that they were following Clove's trademark 4-step sterilization of all instruments. Hard surfaces disinfection, Surgery sterilization and Asepto were being carried out

**Fig 4: Graphical Representations On Response Of Questionnaire On Maintaining Sterilization & Following Guidelines Among Doctors**

in front of the patients. 97.8% doctors felt the highest safety for the dentists and patients was ensured with Aerosol Suction and Decontamination Units and the new Continuous Fumigation Devices installed in each Clove clinic. In 96% cases, patients were provided with a pre-sterilised PPE kit at entry in the clinic which consisted of Face Mask, Head Cap, Gloves and Foot Covers. Hand Hygiene of all patients at the clinic by hand disinfectant was mandatory. 97.5% doctors and assistants felt safe in working with complete adherence to guidelines and using KN 95 masks and complete PPE kits provided by Clove Dental. 15.8% doctors reported that they had deferred some treatments due to a patient showing

symptoms characteristic of COVID-19. (Table 3 & Figure 4) On assessment of attitude towards patient and staff care, every patient was called via Tele Dentistry platform for Triage before booking an appointment. Medical and Travel History, Temperature and SpO₂ measurements were compulsory on a daily basis for doctors, dental assistants, and of patients on every visit. Physical distancing at the clinic by everyone was followed. In 95% cases, the patient's face was scrubbed with disinfectant and Mouth Rinsing was done with 2%

Povidone Iodine before treatment. For every patient, disinfectant solutions like H₂O₂ or Chlorine were added in the Water Bottle of dental units for Air rotor spray. 97.5% doctors relied on Clove's SOPs & guidelines to ensure everyone's safety. 99.3% doctors found the training on COVID-19 guidelines by Clove Dental to be useful. 100% doctors felt that making it mandatory for all doctors and dental assistants to pass the COVID-19 guidelines information by Assessment was a good idea. (Table 4 & Figure 5)

Table 4: Data & Result of Questionnaire on Attitude and care towards patients and team among Doctors

S.No	Questions	Participants	Yes	%	No	%
1.	Is the temperature & SpO ₂ readings of Doctors & staff being recorded daily and maintained in clinic register?	336	315	93.7	21	6.3
2.	Is the protocol of calling every patient at home before their visit to the clinic for Triage being followed?	347	340	98	7	2
3.	Is the personal Medical History & Travel History of each patient recorded before undertaking treatment?	341	332	97.4	9	2.6
4.	Temperature being recorded by digital Infra-Red Thermometer for all patients at clinic?	337	323	95.8	14	4.2
5.	SpO ₂ measurements being taken for all patients at clinic using Pulse Oximeter?	338	314	92.9	24	7.1
6.	Physical distancing being maintained at Clinic?	342	333	97.4	9	2.6
7.	Patient's face scrubbed with disinfectant before undertaking any treatment?	333	313	94	20	6
8.	Do you keep daily track of your Dental Assistant's health, travel & medical history?	406	387	95.3	19	4.7
9.	With complete adherence to guidelines, issue of KN95 masks and complete PPE including eye wear and eye shield; do you feel reasonably safe working in Clove Clinics?	406	396	97.5	10	2.5
10.	Have you deferred any patient's treatment so far on grounds of suspicion of COVID-19?	406	64	15.8	342	84.2
11.	Are you using PPE for every patient as per protocol?	359	349	97.2	10	2.8

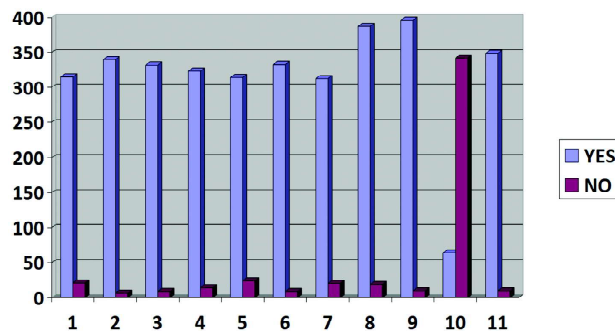


Fig. 5: Graphical representations on response of questionnaire on attitude and care towards patients and team among doctors

DISCUSSION

Various Questionnaire studies have been done on Dentists around the world regarding knowledge, attitude, fear, practice concerns, precautionary measures etc. in COVID situation. A study on 860 dentists across Asia, North & South America, Europe, Africa, Australia and Antarctica showed Good knowledge among 79.5% dentists compared to 95% among Clove's Dentists.⁶ Another study done to assess attitude and behaviour towards the COVID-19 pandemic on 1958 Turkish Dentists elicited that 90% of the dentists were concerned about themselves and their families but only 12% of the dentists wore an N95 mask.⁷ Comparatively, 95.5% of Clove Doctors were using complete PPE kits and KN95 masks (issued in sets of 4). In addition, a study on Fear and Practice Modifications among Dentists to Combat Novel Corona virus Disease on 669 participants from 30 different countries across the world showed that more than two-thirds of the general dental practitioners (78%) were anxious and scared by the devastating effects of COVID-19. Execution of amended treatment protocol in the study was recorded as 61%. The majority of the dentists (76%) were working in the hospital setting out of which 74% were from private, and 20% were from government setups.⁸ Compared to all these figures performance of Clove doctors was much better. A Questionnaire on 3599 Dentists in Italy displayed that only 72% dentists were confident of avoiding infection while the results of our study showed that 99.3% Clove's doctors were completely confident about working in an infection-free environment.⁹ Furthermore, a study on 3309 UK dental professionals on self-isolation showed that 31.2% dentists were suffering from COVID-19 like symptoms, 21.3% home quarantined themselves to protect a vulnerable member of their household, 25.7% did because a member of their household was suffering from COVID-19 like symptoms and 21.8% self-isolated in to protect

themselves.¹⁰ In comparison, 99% of Clove's doctors were ready to work during this pandemic. Another Questionnaire survey which had 166 respondents from 54 countries showed that the practice was running in 90.4% of centres, which gradually decreased activity to 34.6%, with an overall reduction of 55.8%.¹¹ Clove Dental's clinics even in extreme pandemic situation in the country were open for emergency treatments.

CONCLUSION

When compared to the dental professionals around the world as per the studies quoted, Clove Dental doctor's and clinical staff scored exceptionally well in each and every aspect. Clove's doctors following their own standard operating protocols and quality measures were fully prepared, equipped and ready for performing all dental procedures with extreme level of precaution and safety for themselves, their co-workers and patients. Training on these protocols by senior most functionaries of the company for 8-10 days at a stretch and keeping the assessment test before being admitted to clinics also worked as a positive reinforcement for implementation and superior compliance across the company.

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