

Original Research

Current practices of Covid-19 related infection control protocols amongst dental interns and Post graduates in Pune-A survey

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ABSTRACT:

Background: India has seen three deadly waves of CORONA-19 pandemic. Due to following of infection control protocols by healthcare workers and wide spread vaccination drive, the disease curve seems to have stabilized now. However, it has also been observed that the over-all negligence has crept in amongst people regarding infection control protocols. Due to the physical adjacency to the patient's face and aerosols produced during routine dental treatment, probability of cross-infection in dentistry are more. Hence it is mandatory for the dental professionals to continue following the protocols without fail. In teaching institutions, interns and Post graduates have the maximum contact with the patients thus making them susceptible and vulnerable. So, this study was conducted to assess the awareness and current practices of COVID-19 related infection control protocol amongst the interns and Post graduate students of a teaching institute. **Methodology:** A pre-validated structured questionnaire was made available to the interns and postgraduate students of Dental Colleges & Hospitals in Pune using google docx. (documents). **Results:** 90% of respondents were aware of the Covid 19 infection control protocols. However, sPersonal protective equipment (PPE) is currently used by only 58% of respondents. Only 47% were able to maintain the same standards of Covid 19 related Infection Control measures as during Covid era. **Conclusion:** This study indicates that there is awareness & motivation regarding infection control measures in related to Covid 19 in dental interns & Post graduates, however; currently we are not maintaining Infection control protocols as before.

Keywords: COVID -19; Infection control protocols; Dentistry

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INTRODUCTION

The world has strained with a tremendously contagious viral pandemic Corona Virus disease 2019 (COVID-19).¹Pandemic virus upsurge have been indelible contributors to the transience of humans. The COVID-19 led the pandemic list by killing more than 2.7 million in the world. Very few countries in the world fastened their fight against the outburst of corona virus not only with following of infection control protocols but also in producing vaccines and India was one of them.²There are two routes Direct and indirect; for transmission of Covid 19 which is nosocomial infection which occur through infectious saliva-associated respiratory tract secretions. Cough, sneeze, or droplet inhalation can lead to direct transmission, while contact with oral, nasal, or eye mucous membrane can lead to indirect

transmission.³Sometimes individuals though infected can be asymptomatic, thus making the diagnosis & prevention of the transmission of the disease a difficult task. Healthcare workers on the frontlines are at risk to this infection. So, the US Centers for Disease Control and Prevention (CDC) and WHO issued guidelines and information for healthcare personnel.⁴ India has seen two deadly waves of CORONA-19 pandemic. The disease curve at present seems to have stabilized presently due to following of protocols and wide spread vaccination drive. However, it has also been observed that the over-all laxity has crept in amongst people regarding infection control protocols. The risk of cross-infection in Dentistry is considered to be high as aerosols produced during routine dental treatments which involve these of instruments such as ultrasonic

scalars, air-water syringes, and air turbine headpieces that become contaminated with the patients' saliva and blood, combined with the physical proximity to the patient's face.³ Hence it is mandatory for the Dental professionals to continue following the protocols without fail. In teaching institutions, interns and Post graduates have the maximum contact with the patients thus making them susceptible and vulnerable. So, This study aimed to assess the current practices of Covid19 related infection control protocols amongst dental interns and postgraduates in Pune.

MATERIALS AND METHODS

The participants of the study were the interns and postgraduate students of various Dental Colleges & Hospitals in Pune. After acquiring necessary permissions from institutional ethical committee and consents of the participants, a pre-validated structured questionnaire was made available to them using google docx. (documents)

The questionnaire consisted of 2 parts. The first part consisted of the demographic details of the participant. The 2nd part constituted of 9 questions framed to assess the awareness and current practices of COVID-19 related infection control protocol amongst the dental interns and Post graduate students of teaching institutes. These questions were selected by the experts in the subject and validated through peer discussion. Collected data was compiled on MS office Excel worksheet, tabulated and analyzed using descriptive statistics in the view of the study objectives. The percentage of correct and incorrect answers for each question from all the participants were obtained and statistically analyzed.

RESULTS & DISCUSSION

The pre-validated, structured questionnaire was made available to interns and Postgraduate students. It was completely filled by 158 students making response rate 100%. Out of 158 participants who responded, 46.8% were Postgraduates and 53.2% were Interns.

Out of all the respondents, 96.8% were fully vaccinated. That means there is wide vaccination drive going on and people are aware about vaccination. When we asked about awareness regarding infection control protocols, 90% of respondents were aware of the Covid 19 infection control protocols. In a study by Modi et al (April 2020), 87% of all healthcare workers including dentists were aware of the recommended infection prevention and control measures to perform aerosol-generating procedures & also Seventy-nine percent of the responders were aware of the various personal protective equipment (PPE) recommended for use in suspected COVID-19 patients.⁴ In a study by Mubaryk et al (Dec 2021), a majority of the study participants (98.4%) were aware of the COVID-19 infection control policies. On asking about any special training for infection control during Covid 19

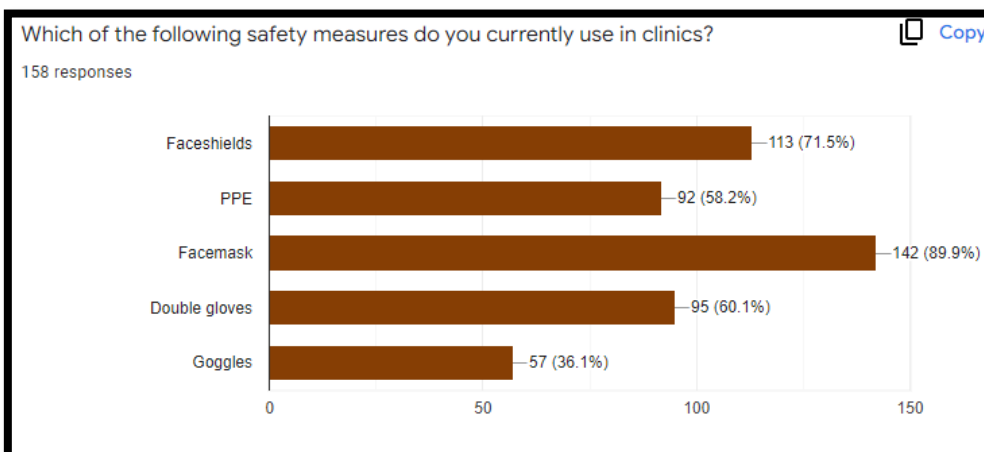
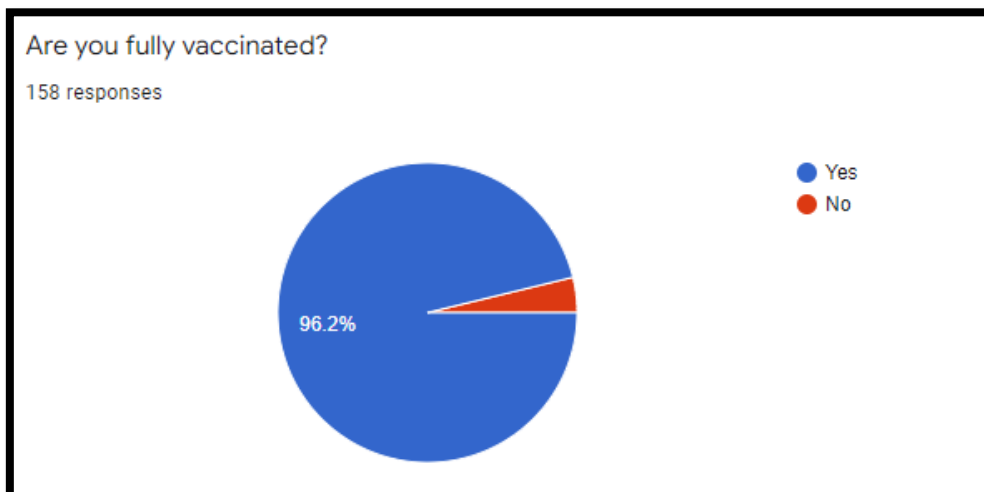
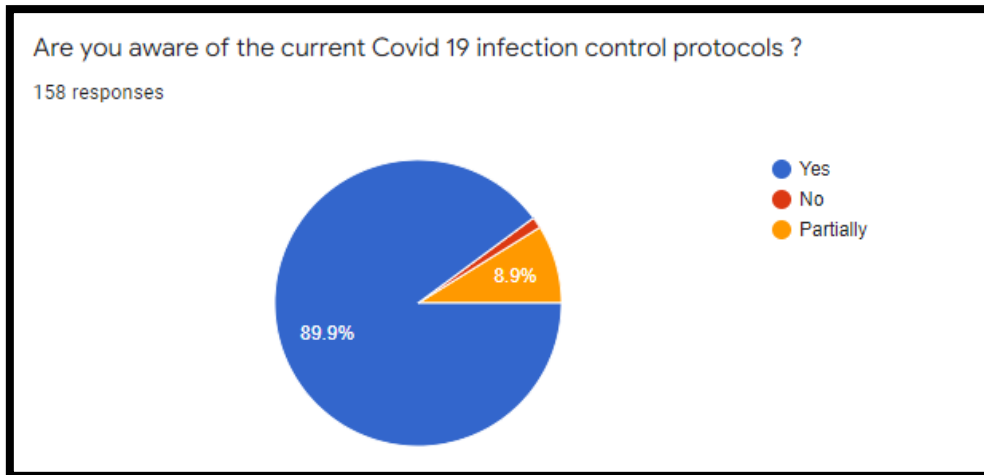
Era, only 49% of respondents received special training for infection control. According to another study, training or lectures about COVID-19 were attended by most of the participants (83.3%).⁵ This was definitely in contrast with studies done in early phase of the pandemic which reported that a vast majority of participants did not attend any lecture, workshop or seminar on COVID-19 for awareness purpose.^{1,6} This shows that there has been a gradual increase in awareness regarding the need of attending such training programs amongst the Dental Professionals. In fact, periodic orientation of students to infection control protocols and training course will assure a shielded surroundings not only for patients but also for students.

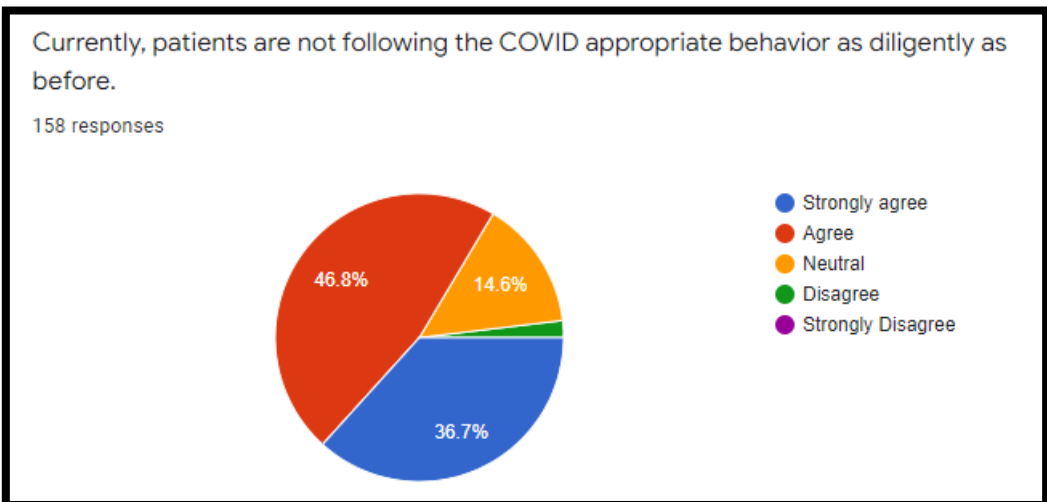
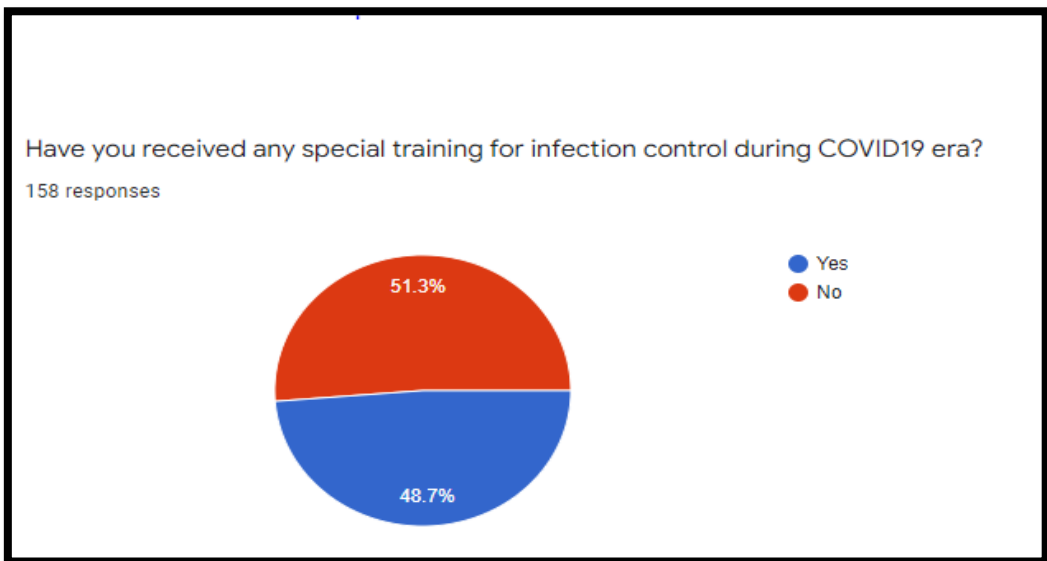
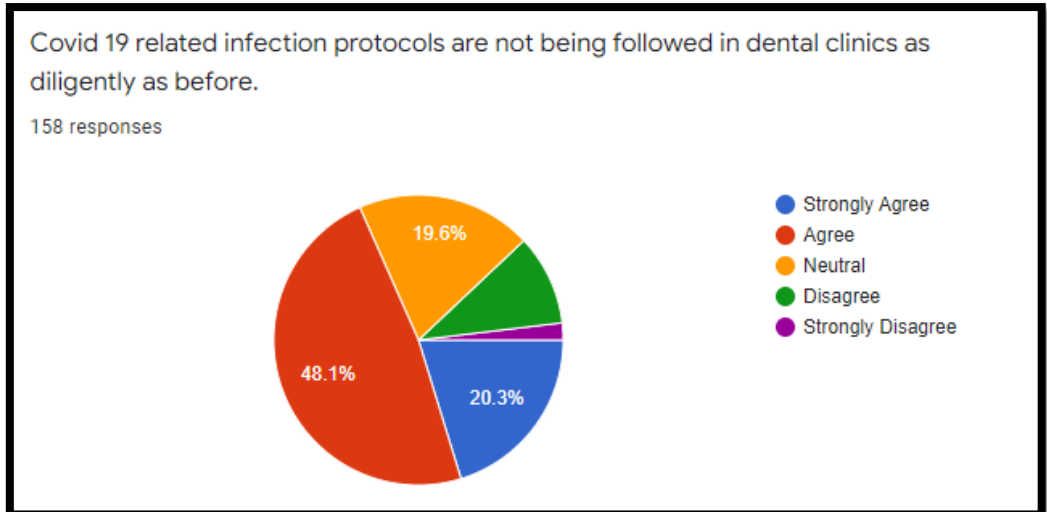
According to our study, On asking about safety measures for infection control being followed currently, Personal protective equipment (PPE) is currently used by only 58% of respondents. Most of the respondent i.e. 89.7% used facemasks and 72.3% of respondents used faceshields. Double gloves and goggles used by 60% and 36.1% of respondents respectively. This indicated that over all currently there is a downward trend of using PPEs amongst the interns and Post graduates and most of them have reverted back to pre-pandemic practices. In a study by Sharaf et al in 2021, Face shield was the most recommended PPE equipment to be used during dental treatment (98.6%) followed by disposable gown (96.3%), while surgical mask was the least recommended equipment (84.2%).⁷ The results of our study, hence; clearly indicates that the COVID-19 related infection protocols are not being followed properly. In studies done only some time back, majority of the respondents opted for the use of N95 respirators over regular medical masks and cloth masks.^{8,9}

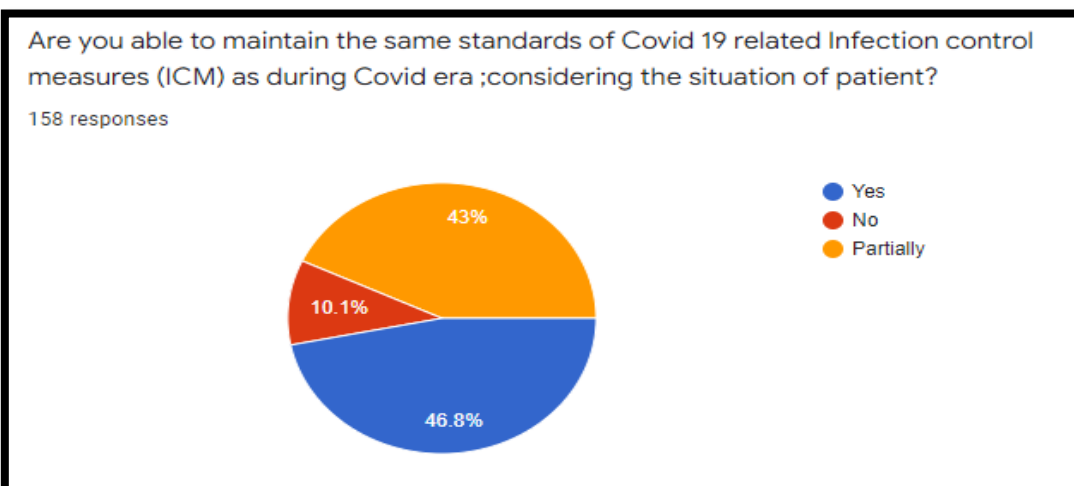
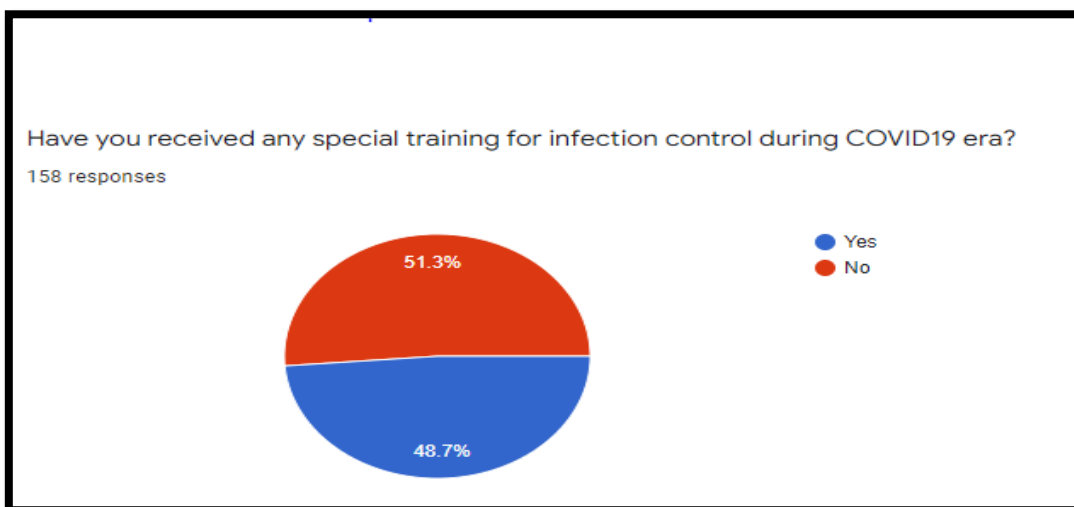
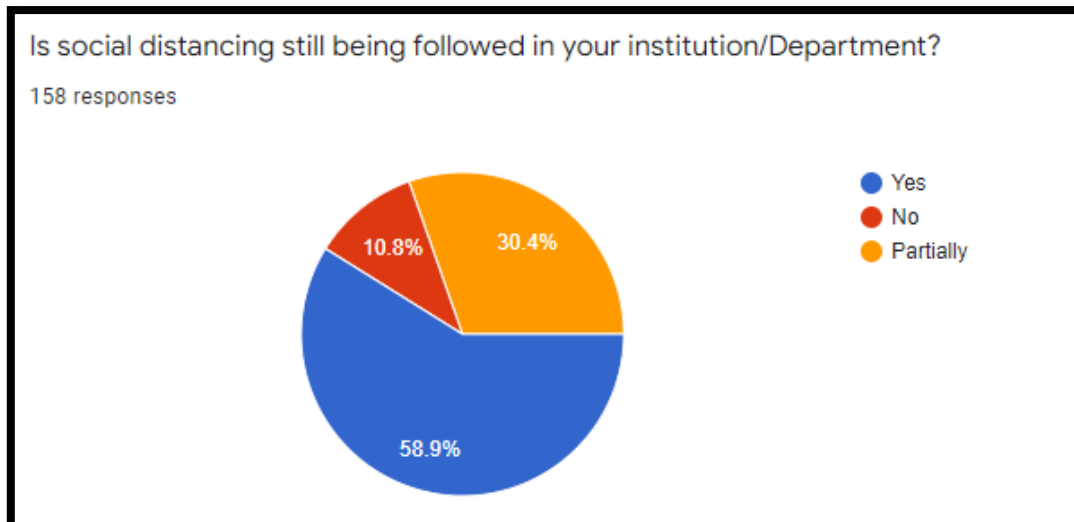
In our study, according to 59% of respondents, social distancing is still being followed in their institution or department. According to 30.3% of respondents, social distancing is partially followed in the institution or department. Almost half of the respondents 48.4% agreed that Covid 19 related infection control protocols are not being followed in dental clinics as diligently as before. 20.6% of respondents strongly agreed that infection control protocols are not being followed in dental clinics as diligently as before. 46.5% of respondents agreed that currently patients were not following the Covid appropriate behavior as diligently as before. 37.5% of respondents strongly agreed that currently patients were not following the Covid appropriate behavior as diligently as before. Less than half of the respondents (47%) were able to maintain the same standards of Covid 19 related Infection Control measures as during Covid era. 42.6% of respondents were partially able to maintain the same standards of Covid 19 related Infection Control measures as during Covid era. Various studies in the past have also

indicated insufficient following of COVID-19 related protocols.¹⁰ Our study indicates that though there is wide vaccination drive, awareness & motivation regarding infection control measures in related to Covid 19 in

dental interns & Post graduates, currently we are not maintaining Infection control protocols as before. This may be the wake up call to prevent the next wave of Covid19.







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