



RESEARCH ARTICLE

Dentistry – Bloomed or Suffered after Covid-19 Pandemic: Insight of Dental Students in Punjab

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ABSTRACT

Introduction: Coronaviruse disease-19 (COVID-19) has become pandemic throughout the world, which is highly transmissible. Because of close physical contact with patients, dental practitioners are particularly at high risk of being infected with COVID-19. The aim of this study was to know the insight of dental students of Luxmi Bai Institute of Dental Sciences and Hospital Patiala, Punjab regarding future of dentistry after COVID-19 pandemic.

Methods: The present cross-sectional descriptive study was conducted at Luxmi Bai Institute of Dental Sciences and Hospital, Patiala, Punjab by sending an online e-survey questionnaire to all the 200 students currently pursuing BDS course out of which 180 responded. The e-survey questionnaire consisted of three parts which consisted of questions about demographics, awareness about COVID-19 and their opinions about future of dentistry.

Results: The results of the study depicted that most of the students thought that dentistry is honorable and esteemed profession and will recommend it to their junior medical applicants. Most of the students wanted to pursue post graduation specialization in future giving preference to Oral and Maxillofacial Surgery branch of dentistry.

Conclusions: The study concluded that most of the dental students were satisfied with dentistry as their profession and 65% of participants felt that the dentistry will bloom as a profession in coming future. Also, there is a need to start more post graduation courses in existing institutions all over punjab providing specialization in dental education as most of the students wanted to pursue it in future.

Keywords: COVID 19 pandemic, Anxiety, Dental practice, students, future.

Introduction

According to the latest available information, the COVID-19 outbreak began in a seafood market in Wuhan City, China, and spread throughout the world. The World Health Organization (WHO) declared COVID-19 a public health emergency of worldwide concern in January 2020 and the World Health Organization's Director-General declared COVID-19 a pandemic that had spread throughout the world.¹ According to an Occupational Safety and Health Administration (OSHA) comment on worker exposure risk to COVID-19, dental practitioners are at extremely high risk of nosocomial infection and can become carriers of the illness as a result of their routine aerosol-generating practices.¹

It is still questionable if infection control measures are correctly followed in dental clinics and outpatient departments, as one of the most important influencing factor is finance or resources.¹ Previous investigations, including one conducted at a Rawalpindi teaching hospital, have revealed a general lack of compliance with and knowledge of the usage of personal protective equipment (PPEs) among dentistry students.¹ So, to prevent the spread of the disease, dentists should prioritize proper history taking, patient education, and infection prevention measures.²

According to the current status, different genetic variants of the virus are still being discovered so the pandemic is nowhere near its end. It is feared that a new pandemic might spread at any time. Therefore, it is important to evaluate the impact of the pandemic in terms of fear and anxiety on undergraduate dental students. The current study was conducted to evaluate the impact of COVID-19 on health and the practices, knowledge and the viewpoint of dental students studying in Luxmi Bai Institute of Dental Sciences and Hospital, Patiala, Punjab.⁶

Methods

The present cross-sectional descriptive study was conducted at Luxmi Bai Institute of Dental Sciences and Hospital, Patiala, Punjab by sending an online e-survey questionnaire to all the 200 students currently pursuing BDS course so as to know their opinion about future of dentistry after the COVID-19 pandemic (convenient sampling). The study was initiated in starting of January 2025 and was completed in the end of the same month with the preparation of manuscript. The inclusion criteria consisted of the dental students currently pursuing dental course in Luxmi Bai Institute, some were posted in clinics, some undergraduates were not posted in clinics and remaining ones were interns. The exclusion criteria consisted of students who were not present at the times when questionnaire was distributed and those who were not willing to participate in the study.

The e-survey questionnaire consisted of three parts. The first section consisted of two questions about demography asking the students their gender and professional year.

The second part consisted of nine questions regarding the awareness of participants about COVID-19 disease. The third part consisted of four questions regarding the opinions of participants about the future of dentistry after the COVID-19 pandemic. The written consent was not needed as the participants had filled the questionnaire and it was implied as consent. The results were arranged in Microsoft Excel and by using SPSS v 23 software and statistical significance was observed.

Results

An electronic link to an e-survey questionnaire was forwarded to a total of 200 dental students of Luxmi Bai Institute of Dental Sciences and Hospital Patiala, Punjab out of which 180 respondents filled the questionnaire and among them 89% females and 11% males participated in the study. Out of the 180 students who filled the questionnaire, 107 (59.4%) were undergraduate students posted in clinics. 44 (24.4%) were not posted in clinics and 29 (16.2%) of students are interns posted in particular departments (Figure.1). 169 (93.8%) students agreed that dentists are at a higher risk of contracting COVID-19 and the rest 11(6.2%) were unaware of the route transmission. 54 (30%) said that they would deny treatment to a COVID suspected patient and feel like avoiding practice until the number of COVID patients decline. The others 126 (70%) have started to use more protective equipment while treating patients. When asked whether you seen a decrease in the number of patients in dental OPD after pandemic, 80 (44.4%) students agreed to this while 100 (55.6%) students said the patient OPD is not affected after pandemic as according to them many countries in the world were under lockdown during the pandemic year to prevent the further spread of the virus.

Every dentist who was practicing during that time has to wear every part of their PPE equipment to prevent the spread of infections. When asked about the difficulty in working on patients while wearing PPE kits from the dental students, 148 (82.2%) agreed and have started to use more protective equipment while treating patients whereas 32 (17.8%) disagreed. 63 (35%) feel more anxious while treating patients while 117 (65%) feel less anxious while treating patients. When asked whether practicing dentistry is going to be expensive in future and the cost of the armamentarium for dentist increased after COVID-19 pandemic, 30 (16.6%) participants voted yes and 150 (83.4%) voted no. Only 77 (42.7%) of the participants agreed to the increase of dental procedure charges in future whereas 103 (57.3%) disagreed about this decision. 117 (65%) of participants felt that the number of patients in dental clinics and hospitals is going to increase in future so they think dentistry will bloom as a profession in coming future whereas 63 (35%) of the students think that the dentistry will suffer because according to them, number of patients will decrease in dental clinics and hospital in the coming future (Table.1).

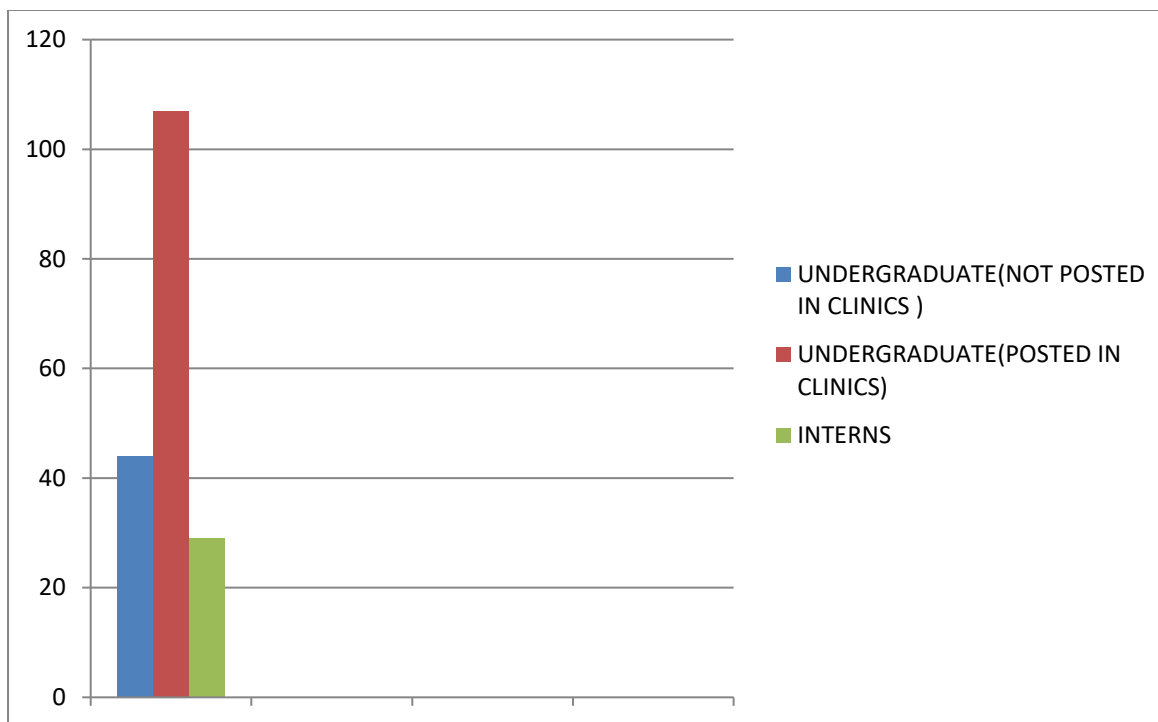
Table 1. Perceptions of dental students about future of dentistry after COVID-19 pandemic (n=180).

Questionnaire	Yes	No
Dentists are at a higher risk of contracting COVID-19	169	11
Avoiding practice until the number of COVID patients decline	54	126
Number of patients decreased in dental OPD after pandemic	80	100
Feeling anxious while treating patients	63	117
Difficulty working on patients while wearing PPE kits	148	32
Armamentarium cost for the dentists increased after pandemic	30 (strongly agreed)	150 (disagreed)
Dental treatment cost increased for the patient after pandemic	77 (agreed)	103 (disagreed)
Dentistry will bloom or suffer as a profession in the coming future	117	63
Recommending your juniors to take up dentistry as a professional course	158	22
Pursue post graduation in future	150	30

More than 80% around 158 of the participants felt that dentistry is an honorable and esteemed profession and they will still recommend the young medical aspirants to take up dentistry as their profession in future whereas 22(12.3%) students are not sure that they will recommend their juniors to take up dentistry as a professional course (Table.1). When asked the students, which branch of dentistry is at the maximum risk of contracting COVID, 72 (40%) pointed the Oral and Maxillofacial surgery branch followed by 43(23.8%) Oral Medicine and Radiology, 26(14.4%) Conservative Dentistry, 19(10.5%) Public Health Dentistry, 10(5.5%) Periodontics, 6(3.3%) Oral Pathology, 2(1.1%) Prosthodontics, 1(0.5%) Orthodontics, and 1(0.5%) Pedodontics. When asked the students, which branch of dentistry is at the least risk of contracting COVID, according to them, 68(37.7%) Public Health Dentistry followed by 36(20%) Oral Pathology, 28(15.5%) Pedodontics, 19(10.5%) Oral Medicine, 17(9.4%)

Orthodontics, 5(2.7%) Prosthodontics, 3(1.6%) Oral and Maxillofacial surgery, 2(1.1%) Conservative Dentistry, and 2(1.1%) Periodontics. This could be because dentists are more vulnerable towards infections spread through direct contact or via aerosols, since their work requires them to be in close proximity to the patient during the time of diagnosis and treatment (Figure.2).

Out of the total participants, 150 (83.3%) wanted to pursue post graduation courses in future whereas 30 (16.7%) were not sure about their decision. Out of those who wanted to pursue post graduate courses, 72 (40%) of the participants wanted to opt for Oral and Maxillofacial surgery followed by 48(26.6%) Conservative Dentistry, 25(13.8%) Prosthodontics, 13(7.2%) Oral Medicine and Radiology, 8(4.4%) Periodontics, 8(4.4%) Orthodontics, 4(2.2%) Pedodontics, and 2(1.1%) Oral Pathology (Figure.2).

**Figure 1:** Bar Graph depicting professional years of the participant.

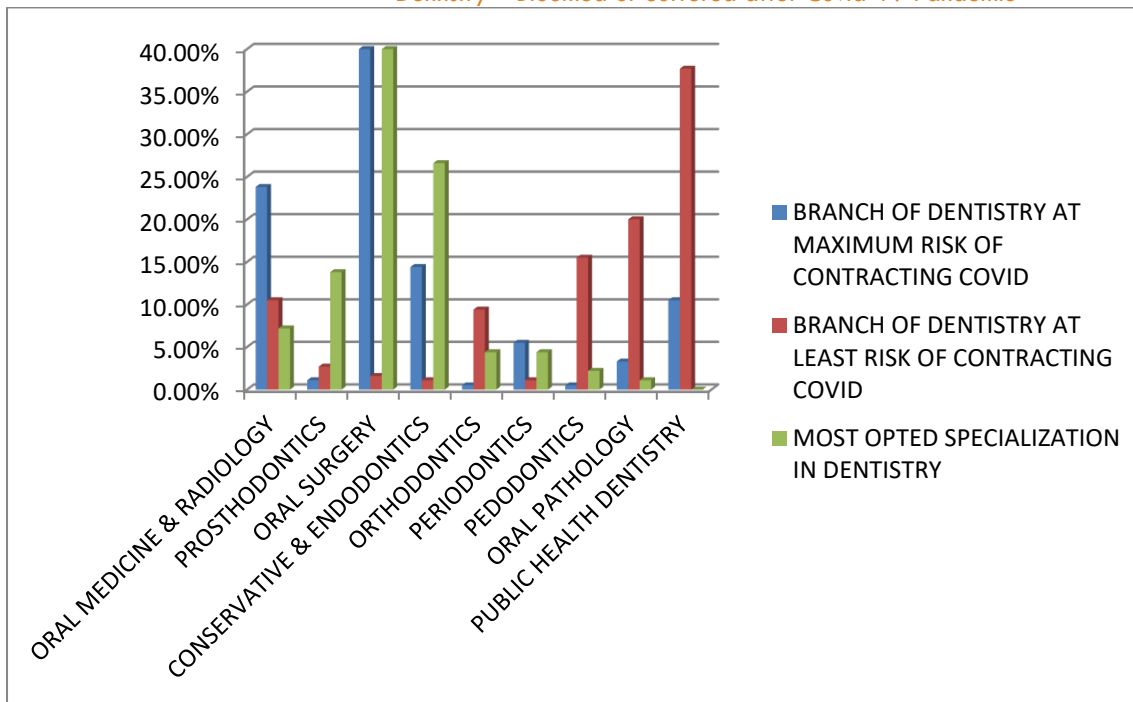


Figure 2: Preferences of the students for the dental surgery branches.

Discussion

A lot of global attention have been given to the Human Coronavirus nowadays after the COVID-19 disease which resulted from novel coronavirus. Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) is the cause of COVID-19 which was a highly contagious viral infection. Fomite transmission as well as respiratory droplet inhalation are the possible indirect and direct transmission routes respectively. Incubation period of COVID-19 is 2-14 days and can be transmitted by asymptomatic patients also.⁸ Dental professionals are more likely to contract SARS-CoV-2 infection than other healthcare professionals, according to earlier studies. To effectively stop the spread of the virus to and from patients and healthcare professionals, PPE, such as gowns, gloves, face shields, goggles and face masks must be used.⁵

After entering to the professional life from the student life, students start facing the challenges. Students may start feeling this pressure just during their graduation phase, so it becomes very important for a dental undergraduate to know their future professional challenges and take appropriate actions to deal with it as it is almost impossible to change your vocation once you have entered the professional stream.⁸

It is therefore of utmost importance to know what is going on in the minds of new dental graduates about their future who are yet to come in the field of professional dentistry.⁸ The current study was carried out to get an idea about the perceptions of dental students about future of dentistry whether dentistry will bloom or suffer after COVID-19 pandemic so that it is helpful for the national dental association to form educational and professional guidelines accordingly. Being budding dentists, they have to complete their graduation and work in dental clinics and hospitals in future. So, when asked whether dentistry will bloom or suffer as a profession in coming future, 65% of the participants responded positively that the patients in dental clinics and hospitals

are going to increase in future. More than 80% of the participants thought that dentistry is honorable and esteemed profession to take up and will recommend young medical aspirants to choose this profession for them. 83 (83.3%) of participants voted that they are going to pursue post graduation courses in future and 40% of the participants wanted to opt for Oral and Maxillofacial surgery followed by Conservative Dentistry, Prosthodontics, Oral Medicine and Radiology, Periodontics, Orthodontics, Pedodontics, and Oral Pathology.

The findings of this study show that most of the young budding dentists wanted to pursue post graduation courses, so more and more institutes providing dental education in Punjab should initiate post graduation, particularly the subjects which are more favored by students.⁸ The study only represents students of Luxmi Bai Institute of Dental Sciences and Hospital, Patiala which is rather a small sample size, so more similar studies are required to be carried out all over the country to get a generalized view on the situation.

Conclusion

By the results, we conclude that the dental students and dentists had knowledge about Covid-19 and showed higher levels of anxiety when dealing with patients. The study concluded that most of the dental aspirants were satisfied with dentistry as their profession and wanted National Dental Association to fix the minimum charges of each dental procedure. Also, more and more post graduation courses need to be started in existing institutions providing dental education so that most of the dental students get the chance to pursue it in future. Researches similar to this study needs to be carried out in other countries so as to evaluate the effects of COVID-19 pandemic on dentistry.

Conflict of Interest

None

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