

# Perceived oral health status and treatment needs of dental students

## ABSTRACT

**Introduction:** The aim of this study is to determine the oral health status, anxiety levels, and perceived dental treatment needs of dental students in India.

**Materials and Methods:** A descriptive cross-sectional study of students from Kalka Dental College, India, was conducted using self-administered questionnaire to obtain information on demography, self-reported oral health status, knowledge of the impact of oral health on daily life activity, anxiety levels, dental attendance, and perceived dental needs.

**Results:** Fifty-three percent of respondents rated their oral health as good and almost all (99%) agreed that oral health is a part of general health. Out of 80.1% who had previous dental treatment, scaling and polishing accounted for 16%, whereas 19% had their orthodontic treatment done. At present, their perceived dental treatment needs range from scaling and polishing (36.98%) and fillings (29.79%) to orthodontic treatment (33.2%). Forty-six percent of patients reported a feeling of anxiety while visiting a dentist.

**Conclusion:** This survey revealed that most of the students are aware that oral health is a component of general health and that it has an impact on an individual's daily life. More than half of the students perceived their oral health as good, but only a few knew that there is a need for a preventive approach to oral health as evident by the percentage that perceived scaling and polishing as a treatment need.

**Keywords:** Dental personnel, dental school, oral health awareness, quality of life

## INTRODUCTION

The past 50 years has witnessed a reduction in the severity and prevalence of oral disease among the population of the developed countries.<sup>[1]</sup> This can be the result of dental care been systematically organized to improve dental health attitudes among children and the young<sup>[2]</sup> and changed the dental caries patterns affecting them. It also resulted in more adults being able to keep their natural dentition functional to a later age.<sup>[3]</sup>

On the other hand, little is known about the oral health attitudes and behavior of dental personal pursuing their graduation from developing countries such as India in comparison with those from developed countries, although such knowledge is an indication of the efficacy of applied dental health education programs. The study done here provides data for future research and allows comparisons with a student's oral health attitudes in other nations.

The perceived oral health is a subjective measure of an individual's perception of his or her oral health. It has been said that an individual's self-perception of oral health will be

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**Received:** 28 February 2019, **Revised:** 03 April 2019, **Accepted:** 14 May 2019, **Published:** 18 June 2020

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**How to cite this article:** Deep A, Singh M, Sharma R, Singh M, Mattoo KA. Perceived oral health status and treatment needs of dental students. Natl J Maxillofac Surg 2020;11:76-80.

Access this article online	
<b>Website:</b> www.njms.in	<b>Quick Response Code</b> 
<b>DOI:</b> 10.4103/njms.NJMS_14_19	

determined by the clinical oral conditions and the impact of oral health on daily life.<sup>[4,5]</sup>

Patients' perceived oral health is considered a useful measure of outcome in dentistry because of its relation to the predisposing sociodemographic factors and patients' utilization of dental services.<sup>[4]</sup> An individual's perception of oral health measures the value attached to oral health and the likelihood of seeking oral care to achieve optimal oral health status.

Oral health problems can impact the quality of life in several ways. Poor oral health may prevent students from expressing positive emotions, which can impact their social interactions and the way they feel about themselves.<sup>[6]</sup> The periodontal health of adults affects their smiling patterns and their smile-related quality of life. Poor periodontal health may also prevent adults from expressing positive emotions which, in turn, can impact their self-concept as well as their social interactions.<sup>[7]</sup> A study on the incidence of impacts of poor oral health on daily performances showed that eating, emotional stability, physical activities, and sleeping were affected. Pain and discomfort, due to toothache, were mainly perceived as the causes of impact.<sup>[8]</sup>

Since the establishment and maintenance of good general and oral health is a priority and a key factor in enabling adults to achieve overall well-being and improved quality of life, it is important to assess how individuals rate their oral health status, their perceived dental need, and actual utilization of available dental services. The study group included students joining the dental course in Kalka Dental College, Meerut, Uttar Pradesh (UP), India. This study group is important because they are the future oral health-care givers and it is very desirable that they have the right knowledge and that they should follow proper oral health practices.

The objectives of this pilot study, therefore, were to investigate the general and dental health status and the perceived dental needs of dental students' pursuing graduation in Kalka Dental College, Meerut, UP, India.

## MATERIALS AND METHODS

A descriptive cross-sectional study of 291 students of Kalka Dental College, Meerut, UP, India was conducted. A self-administered questionnaire was used to obtain information on demography, self-reported oral health status, knowledge of the impact of oral health on daily life activity, dental attendance, anxiety levels, and perceived dental need.

The ethical approval of this survey was obtained from the ethical committee of the university (CCS University, Meerut, UP CAAE/DEN/ETHIC/12500208). Informed consent was obtained from participants before the commencement of the survey. This original study is a survey only Statistical analysis was used (SPSS version 15.0) IBM Corporation (Armonk, New York, USA) IBM statistics. The result was presented as tables, pie chart, and bar charts.

## RESULTS

All of the respondents were within the age group of 20–25 years. There were more females (61.2%). The percentage of respondents who rated their oral health as good and fair was 53% and 43%, respectively [Figure 1]. Almost all (99%) agreed that oral health is a part of general health [Figure 2]. Majority of the respondents (92.4%) agreed that oral health has a role in daily life [Figure 3]. About 80.1% of respondents had utilized dental service in the past for various reasons. Scaling and polishing of teeth was the treatment done in 16% of cases, 19% had their orthodontic treatment done, 16% had undergone fluoride application, 14% have visited the dentist for routine checkups, and 1.7% had undergone treatment for crown and bridges [Table 1]. About 94.86% believe that the health of mouth and dentition impacts the health of the body [Table 2]. At present, 66.7% of respondents think that they still need other dental treatments. The perceived treatment needs are scaling and polishing (36.98%), fillings (29.79%), and orthodontic treatment (33.2%) [Table 3]. Forty-six percent of patients told that they feel uneasy while visiting a dentist due to anxiety [Figure 4].

## DISCUSSION

Oral health is now an important component of general health, and there is an increasing awareness of oral health worldwide.

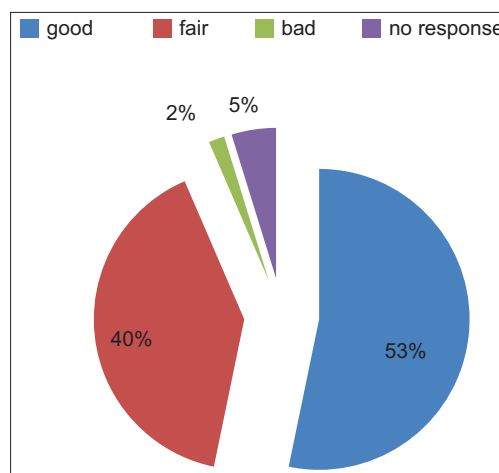


Figure 1: Self-reported oral health status

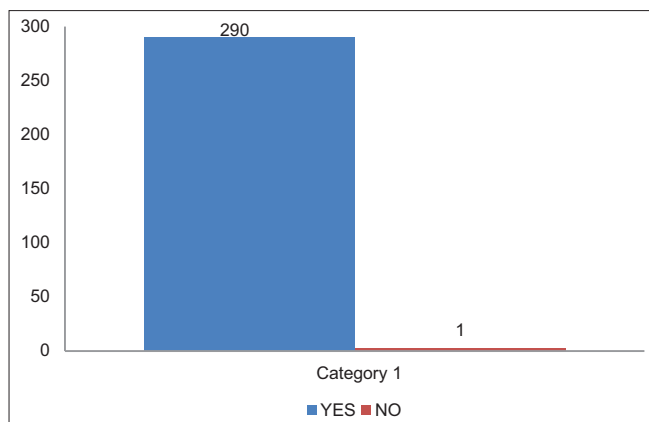


Figure 2: Respondents who believed oral health is a part of general health

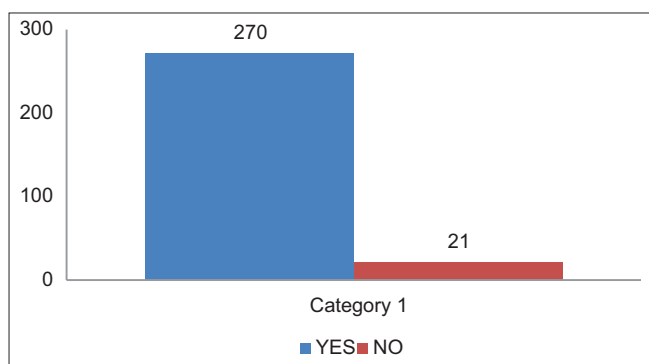


Figure 3: Respondents who believe that oral health has an impact on daily life activity of individuals

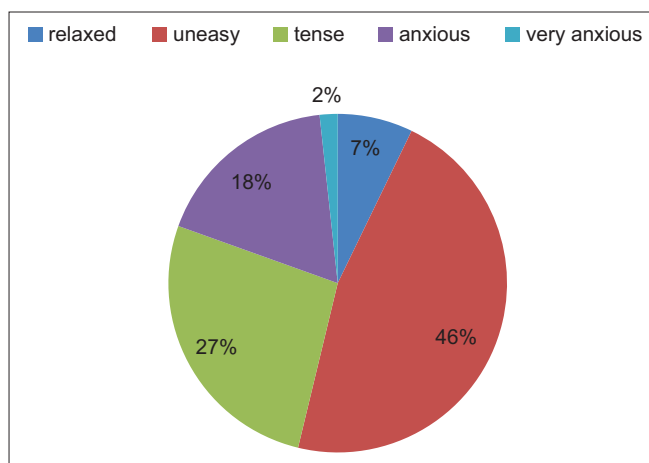


Figure 4: Respondent's anxiety level

A lot has been done by the World Health Organization Global Oral Health Programme in the past 5 years to increase this awareness.<sup>[9]</sup>

This study presented a comprehensive overview of the oral health behavior, knowledge, and attitudes of dental students and, to the best of our knowledge, represents the first study of its kind that explored these issues among dental students

Table 1: Attitude toward professional dental care

Student Questionnaire	Number and percentage of student's response
How often do you visit the dentist?	
Regularly	61 (21)
When in pain	143 (49)
Occasionally or never	87 (29)
Are regular visits to the dentist necessary?	
Yes	208 (71)
No	66 (22)
Don't know	18 (6)
The management sought in your last visit	
Examination and checkup	42 (14)
Scaling and gum treatment	47 (16)
Fillings	38 (13)
Crown or bridge	5 (1.7)
Orthodontic treatment	57 (19)
Extractions	33 (11)
Fluoride application	47 (16)
Others	28 (9.58)
The driving factor for your last visit	
Toothache	55 (18.8)
Parent's advice	49 (16.2)
Dentist's advice	59 (19.2)
Other reasons	94 (32.3)
Never visited	35 (11.3)

Table 2: Knowledge and awareness of dental and general health among the study population

Questionnaire regarding dental and general health	Number and percentage of student's response
Does caries affect dental esthetics?	
Yes	256 (87)
No	26 (8.9)
Don't know	10 (3.4)
Do sweets affect dental health?	
Yes	231 (79.1)
No	56 (19.1)
Don't know	5 (1.7)
Do soft drinks affect dental health?	
Yes	252 (89.7)
No	25 (8.8)
Don't know	15 (5.5)
Does the health of mouth and dentition impact the health of the body?	
Yes	277 (94.86)
No	11 (3.6)
Don't know	4 (1.5)
Treatment of toothache is as important as any organ in the body	
Yes	282 (96.8)
No	5 (1.7)
Don't know	5 (1.7)

in India. Oral diseases have an obvious impact on daily activities, such as eating, speech, and swallowing, and have

**Table 3: Perceived dental treatment needs?**

Common dental treatment performed	Percentage of students who underwent treatment
Scaling and polishing	108 (36.98)
Fillings	87 (29.79)
Orthodontics	97 (33.2)

been measured in several studies using oral health quality of life index and oral health impact index. In this study, the awareness is high as majority (95.5%) agreed that oral health is a part of general health and 94.6% agreed that oral health has a role in daily life. The result is similar to that from a study done in Brazil, where it was concluded that oral health conditions generate a significant impact on individuals' quality of life.<sup>[10]</sup>

This survey revealed that a high percentage of the students in this study brush their teeth at least once daily although this effort was not fully organized or supported by parents. The participants also reported irregular times of toothbrushing. Lack of both parental and child oral health education might also explain these findings. Parent's failure to organize or support their children's toothbrushing efforts coincided with findings from previous studies that reported lack of acceptable levels of knowledge and awareness of periodontal problems among Indian adults.<sup>[7]</sup> The use of other recommended oral hygiene methods such as dental floss and mouthwash was found to be rare; this also could be attributed to the lack of oral health education and/or the cost of such aids.

The high awareness of dental caries including its impact on the dentition, cause, and prevention in comparison to periodontal health could be attributed to the fact that dental caries is more prevalent in students than periodontal disease. This will eventually improve the students' knowledge regarding dental caries as they attend dental clinics seeking treatment for it; thus, they may receive more professional advice in this regard. During the last decade, extensive efforts have been made by the dental schools in India in an attempt to improve the periodontal knowledge and practice of the dental personnel in this country, but still, these efforts are not enough to raise the standards of professional periodontal practice among Indian dentists. Consequently, dental health education programs that aim to improve oral health practice among the population are very important.

Dental anxiety, a problem for many adults and children, acts as a barrier to treatment, by avoiding and/or attending treatment irregularly or for visiting a dentist for emergencies only. Patient anxiety poses major management problems for the dental team, such as additional time required for treatment, missed appointments, and raised pain thresholds.

The management of patient anxiety is a major cause of stress for clinicians. In our study, anxious participants assessed their dental treatment needs as higher, which may result in further avoidance and treatment postponements.

Most of the study participants reported irregular dental attendance. A surprising finding in this regard was that most participants were aware of the importance of regular dental attendance. Some findings in this study might offer an explanation for this behavior. A high proportion of the participants reported that they did not visit due to fear from dental treatment, high costs of dental care, and lack of toothache. Lack of parental encouragement and advice to visit the dentist might also contribute to the irregular dental attendance.

Personal rating of one's own health status is subjective, but self-efficacy ascertained from it is instrumental to the benefit attached to the health parameter being measured. In this study, those who rated their oral health as good and fair were 53% and 40%, respectively. This shows that few people are still not sure of their oral health status and are sincere enough to own up. This result may just be a reflection of what is truly obtainable in the studied group. This result is also in accordance with a study from China,<sup>[11]</sup> where self-assessment of dental health of Chinese adolescents was generally good. Only 12% of the students who participated in the Chinese study rated their oral health as "poor" or "very poor."

The study showed that 21% of the students believe that regular visits to the dentist are not necessary.

Out of 80.1% of the respondents who had dental treatment prior to the study, scaling and polishing accounted for 66.1%. At present, only 48.8% perceived a need for scaling and polishing at a future date. The results suggest a relatively low priority for receiving needed dental care similar to that reported in another study among dental students.<sup>[12]</sup> It has been said that regular dental checkups and treatment are the cornerstones of good oral health.<sup>[13]</sup> This study suggests that the respondents are not utilizing the dental services optimally as none of them will visit the dentist just for routine dental examination.

## CONCLUSION

This survey revealed that most of the students are aware that oral health is a component of general health and that it has an impact on an individual's daily life. More than half of the students perceived their oral health as good, but only a few knew that there is a need for a preventive approach to oral

health as evident by the percentage that perceived scaling and polishing as a treatment need. To improve the utilization of the existing dental services, it is recommended that periodic oral health education should be carried out among this group of students. They are expected to be knowledgeable about oral health issues by virtue of their training, but it should not be assumed that they will do the expected.

#### Acknowledgment

The authors thank Dr. Adhiraj Veer Singh for his able guidance in completing the original research and preparing the manuscript.

#### Financial support and sponsorship

Nil.

#### Conflicts of interest

There are no conflicts of interest.

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