



## Are Medical Students Aware About Their Own Oral Health? A Cross Sectional Study in South Gujarat, India

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## ABSTRACT

**Introduction:** The awareness of health providers and their attitudes towards their oral health could reflect their approach toward oral health in future medical practice.

**Objectives:** The present study was conducted to assess the oral hygiene awareness of the undergraduate students a medical college in Southern part of Gujarat state in India.

**Material and Method:** A descriptive cross-sectional study was been conducted. A self-structured, pre- tested questionnaire was used in the study for assessing the oral hygiene knowledge and awareness. The questionnaire consisted details regarding the various socio demographic details, questions regarding brushing, importance of oral health etc. A 15-point score developed to score the awareness about the oral health.

**Results:** The results revealed that the all the undergraduate students had 100% knowledge regarding the number of teeth present in the permanent dentition. Mean knowledge score was 7.5 out of 15. Boys has lower score compared to girls but the difference was non-significant ( $p > 0.05$ )

**Conclusion:** We concluded that the awareness of the undergraduate students was not satisfactory. Hence, a comprehensive program regarding oral hygiene must be implemented, starting from their first year of education.

**Keywords:** Oral health, medical students, hygiene, awareness

## INTRODUCTION

The behaviour of oral health providers and their attitudes towards their oral health could affect their capacity to deliver oral health care and thus might affect the oral health of their patients.<sup>1,2, 3</sup> Health providers need to set an example for their patients by maintaining good oral health in their own mouths. Through their undergraduate study, it is logical for students to develop and modify their attitudes/behaviour towards their own oral health.<sup>4</sup>

Oral health attitudes and behaviour are influenced by parents in early years of life and also predict the actual oral health status.<sup>5,6</sup> Medical students are the future providers of medical care and are expected

to be a role model for their patients, family members and friends and ensure their awareness of health maintenance including oral health.<sup>7</sup>

As the medical curriculum advances to final year improvement in knowledge regarding oral hygiene is expected. In addition, it is a known fact that the males and females differ in their perception about similar situations.<sup>8,9</sup>

Attitudes of medical students toward their own oral health affect their oral health habits and have possible influence on the improvement of the oral health of their family, relatives and patients.<sup>10, 11, 12</sup> There is no standard method mentioned in literature which can be used to assess oral health attitudes. Researchers found oral attitudes and behav-

ior among medical students to be different among pre-clinical and clinical years. Furthermore, oral health attitudes and behaviour among medical students were found to vary in different countries and different cultures.<sup>13,14</sup> Since males and females have different physiological and psychological behaviours, it is possible their oral health behaviour might be different as well. Researchers have found females to engage in better oral hygiene behavioural measures, possess a great interest in oral health, and perceive their own oral health to be good to a higher degree than do males.<sup>15</sup>

According to various studies, it was found that the female university students have better habits in terms of tooth brushing than male students do.<sup>16, 17</sup> Others studies also revealed that the females visited their dentists and brushed their teeth more often than males do.<sup>18, 19, 20</sup>

The purpose of the present study was to explore the dental health attitudes and behaviour of medical students in India. These data may help in assessing and comparing the focus of the undergraduate curriculum.

## MATERIALS AND METHODS

**Study design:** A descriptive cross-sectional study was conducted in a medical college in southern Gujarat. A self-structured, pre-tested questionnaire was used in the study for assessing the oral hygiene behaviour, knowledge and attitudes. The questionnaire is in two part. The first part consisted basic information about the participants like name, age, gender, parents' education and occupation. The second part of questionnaire was consisted of 15 close-ended questions, which included questions on brushing, flossing, types of dentition etc. As such there was no validated tool to assess awareness and perception towards oral hygiene, the questionnaire was validated by three subject experts.

**Sampling method & sample size:** The questionnaire was circulated to students of entire college by converting it in Google form and shared through email and various other social media. A deadline of four week was set for submission of form. Submission of form itself was considered as consent for the study.

### Inclusion & Exclusion criteria:

All the undergraduate students willing to participate in the study and submitted the online form were included in the study.

**Pilot study and Pre-testing of the questionnaire:** Pilot study was conducted amongst 20 students in order to determine the feasibility of the study and

to get acquainted to it. Depending upon the answers and feedback, minor modification was done in the questionnaires.

**Data collection and analysis:** The data was collected by using a pre-tested, self-structured; close-ended questionnaire consisting of 15 questions (7 each for knowledge, 6 for attitude and 2 for practice) taken on a nominal scale were administered to evaluate the knowledge, attitude and practices regarding oral hygiene to the targeted population. The questionnaire consisted details regarding brushing, importance of oral health etc. Each question assigned score of 1 for correct answer and zero for incorrect answer.

The study was conducted in the year 2019. The data was collected, compiled and analysed. Mean score was compared with various socio-demographic variables by using students' t test or ANOVA to assess their association with score.

## RESULTS

Within the predefined period, we received 337 response. Out of these 59 were removed due to various reasons (31 were duplicate, 23 were not a medical student, 5 were post graduates). So finally, 278 participants were considered for calculation.

As shown in table 1, 43% students were above 20 year of age and 52.5% were female. Mother of nearly 80% student were having above primary level education while father of more than 64% students were graduate. Highest students were from middle class.

**Table 1: Socio-demographic profile of Students**

Socio-Demographic variables	Cases (n=278) (%)
<b>Age</b>	
<18 year	56 (20.1)
18-20 year	102 (36.7)
>20 year	120 (43.2)
<b>Gender</b>	
Male	132 (47.5)
Female	146 (52.5)
<b>Education of Mother</b>	
Primary or below	56 (20.1)
Secondary & Higher secondary	153 (55.0)
Graduate & above	69 (24.8)
<b>Education of Father</b>	
Primary or below	23 (8.3)
Secondary & Higher secondary	75 (27.0)
Graduate & above	180 (64.7)
<b>Socio-Economic Class*</b>	
Upper	45 (16.2)
Upper Middle	78 (28.1)
Middle	99 (35.6)
Lower Middle	42 (15.1)
Lower	14 (5.0)

\*According to modified Prasad's Classification

**Table 2: Comparison of mean score with Socio-demographic profile of Students**

Sociodemo-graphic Variables	KAP Score (Mean $\pm$ SD)	P value
<b>Age</b>		
<18 year	10.4 $\pm$ 1.12	0.042
18-20 year	12.2 $\pm$ 2.04	
>20 year	12.3 $\pm$ 2.40	
<b>Gender</b>		
Male	11.1 $\pm$ 2.64	0.432
Female	12.7 $\pm$ 2.92	
<b>Education of Mother</b>		
Primary or below	9.4 $\pm$ 1.40	0.038
Secondary & Higher secondary	11.2 $\pm$ 3.83	
Graduate & above	13.1 $\pm$ 1.73	
<b>Education of Father</b>		
Primary or below	10.1 $\pm$ 0.58	0.075
Secondary & Higher secondary	11.8 $\pm$ 1.88	
Graduate & above	12.1 $\pm$ 4.50	
<b>Socio-Economic Class*</b>		
Upper	10.1 $\pm$ 1.50	0.088
Upper Middle	12.6 $\pm$ 2.60	
Middle	13.8 $\pm$ 3.30	
Lower Middle	12.2 $\pm$ 1.40	
Lower	9.6 $\pm$ 0.47	

Mean score knowledge, attitude and practice score were 12.2 with standard deviation of 1.94. Mean score was calculated for various socio-demographic groups and compared (Table 2). Mean KAP score was significantly higher in above 18 years and students having mother's education graduation and above. However, mean KAP score is not associated with gender, education of father and socio-economic class.

## DISCUSSION

In this present study, it was seen that the knowledge, attitude and practices of undergraduate students was found to be satisfactory. Although, all the undergraduate medical students had scored 100% in knowledge section, their scoring in attitude and practice section was lesser. There was a study done in Kanpur city on medical students where it was found that they had good knowledge, attitudes and practices regarding 'permanent teeth, frequency of brushing, number of dental visits, importance of oral health and overall health, bleeding gums and gum diseases.<sup>21</sup>

It was found in the current study that first year undergraduate students (70%) believed that the dental treatment is expensive and the frequency of scores were decreased from second year to final year. Various studies also revealed that medical undergraduate students when started their clinical curriculum believed that dental treatments were not expensive and for a better oral health, treatments are very important.<sup>22, 23, 24</sup>

The current undertaken study revealed that the percentage regarding the importance of visiting a dentist was found to be highest in final year students (95%) and lowest in second year students (75%). Another study was conducted amongst medical students in Karad and it was found that only 60% students had believed that visiting a dentist is important.<sup>25</sup> Knowledge regarding bleeding of gums and gum diseases was also found to be 50% amongst first year and second year students whilst final year were having more knowledge i.e. 65% and 80%. Another study, similar to the present study was conducted in Iringa where knowledge regarding bleeding of gums and gum diseases was found to be very low.<sup>26</sup>

Therefore, the knowledge, attitudes and practices among medical undergraduate students was found to be satisfactory. However, efficient measures must be taken in order to increase the knowledge and awareness regarding oral health.

## CONCLUSION AND RECOMMENDATIONS

The current study aimed at assessing the oral hygiene attitudes and knowledge of undergraduate medical students. The results showed that medical students in Kanpur still need to improve their oral health behaviours in order to serve as a positive model for their patients, families, and friends. More emphasis should be placed on the courses that teach the students how to improve their oral health. Further research is needed to clinically assess the oral health of the students.

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