



## A Survey About Awareness Of Oral Hygiene Practices Among The Students Of Goenka College In The Pethapur Village

<sup>1</sup>Dr. Charu Agrawal, <sup>2</sup>Dr. Foram Shah, <sup>3</sup>Dr. Pushti Purohit, <sup>4</sup>Dr. Vibhuti Madhad ,  
<sup>5</sup>Dr. Bhoomika Kamaliya\*, <sup>6</sup>Dr. Nidhi Vora

<sup>1</sup>Head of Department, <sup>2</sup>Reader, <sup>3-4</sup>Senior Lecturer, <sup>5-6</sup>Post Graduate Student  
Department of Periodontology, Goenka Research Institute Of Dental Science,  
Gandhinagar, India, Pin – 382610

**\*Corresponding Author:**

**Dr. Bhoomika Kamaliya**

Department of Periodontology, Goenka Research Institute Of Dental Science, Gandhinagar, India

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### Abstract

**Aim:** Oral hygiene is most important factor for prevention of oral diseases. With educated people, concept of prevention and well-being could be more easily understood, irrespective of their course of study. So, present study was conducted to assess oral health, knowledge, attitude, and behaviour in professional college students. Present study was performed with an objective to compare the oral health awareness among the students of dental, nursing and Ayurveda and to compare oral hygiene awareness among male and female students.

**Materials and Method:** Survey Performa was prepared with help of a self-administered structured questionnaire written in English to assess oral health knowledge, attitude and behaviour of students. 300 students who voluntarily agreed to participate in the survey were selected. SPSS, Version 20.0 was utilized for statistical analysis. The Chi-square test was performed for comparison of responses obtained from males and females.

**Results:** Oral health awareness was high among the Dental students compared to Nursing and Ayurveda students. Females showed better oral health behaviour than male students. **Conclusion:** There was lack of exposure in Ayurveda and nursing students about oral health in their education. Hence, provision for oral health education must be implemented in professional courses.

**Keywords:** Knowledge, Oral health education, Oral hygiene, Students

### Introduction

Oral health plays an important role to maintain the general health because the oral cavity is considered the gateway to the body and acts as a mirror that reflects the status of general health.<sup>1-2</sup>Periodontal diseases including gingivitis and periodontitis are infectious diseases that result from bacterial infection where the causative bacteria are found in dental plaque.<sup>3</sup>However, gingivitis is usually the early phase of the inflammatory process and if changed to periodontitis, will lead to periodontal tissue destruction.<sup>4</sup>Therefore, controlling gingivitis may

have a profound health effect when it may result in a lower prevalence of destructive periodontitis.<sup>5</sup>

Plaque-induced periodontitis is a group of diseases of the periodontium that is manifested as progressive destruction of periodontal ligament and alveolar bone, with periodontal pocket formation or gingival recession or both that may become one of the major causes of tooth loss in adult life.<sup>6-8</sup>Previous study was done in Jordan showed that the prevalence of periodontal disease is 76% for gingivitis, 2.2% for aggressive periodontitis, and 5% for chronic

periodontitis.<sup>9</sup> Periodontitis was more frequent among males than females. Several epidemiological studies have identified many risk factors to be implicated in the manifestation and progression of periodontal diseases such as age, gender, oral hygiene habits, frequency of dental visits, income level, educational attainment, residence place, cigarettes smoking, diabetes mellitus, ethnicity, microbiological factors, genetic factors, immunity, social and behavioral factors, and psychological factors.<sup>10-13</sup> The importance of oral health is still a neglected and ignored social issue because most of the people are unaware of the relationship between oral health and systemic diseases. Therefore, there is a significant amount of emphasis to direct the efforts toward the prevention of diseases rather than the treatment. Hence, adequate awareness and knowledge about oral health and good oral hygiene practice will maintain good oral and general health. There is a common notion that educated people in society are more aware of the correlation between general health and oral diseases, but there is insufficient data in the literature to prove this view.<sup>14</sup>

This survey was therefore initiated with a prime focus to determine the oral health awareness levels among the dental, Ayurveda, and nursing students of Goenka college in pethapur village. **MATERIALS AND METHODS:** Present cross-sectional study was conducted in professional among colleges in Pethapur village. Ethical approval was obtained from the hospital research ethics committee and written informed consent was obtained from study participants.

**Inclusion Criteria:** Undergraduate students having age of above 17 years.

**Exclusion Criteria:** Postgraduate students. Age more than 24 years.

**Sample Design:** Simple random sampling method was used to select three professional colleges in Pethapur village. From the total number of students pursuing the undergraduate course, 300 students who voluntarily agreed to participate in the survey were selected. They were asked to respond each question according to the given format provided in the questionnaire. The students took an average of 15 minutes to complete the procedure.

**Performa Survey:** The Performa survey was prepared using a self-administered structured questionnaire written in English to assess the objectives. The form includes two parts. The first part includes general information such as age, gender and occupation of the student. The second part consists of 15 questions in which question number 1 to question number 6 and question number 14 are related to oral hygiene awareness based on previous studies 15-16 and question number 7 to question question number 13 and question number 15 related to knowledge about periodontal disease.

**Statistical Analysis:** The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2007) and then exported to data editor page of SPSS version 15 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics included computation of percentages, means and standard deviations. For all tests, confidence level and level of significance were set at 95% and 5% respectively. The Chi-square test was performed for comparison of responses obtained from males and females. The level of statistical significance was set at  $P < 0.05$ .

#### **Result:**

Out of 300 participants, 32.7% were male, and 67.3% were female. The mean age of the students was  $20.36 \pm 1.93$  years with minimum age of 17 years and maximum age of 27 years. Although, brushing was the commonly used method of cleaning, it was found that the percentage of subjects brushing their teeth twice daily regularly was 71% in dental, 55% in Ayurveda, and 50% in nursing students. This comparison between different professional students made by Chi-square test was significant ( $P < 0.05$ ). Although, the average percentage of students, who brushes twice daily regularly was 61% [Table1] subjects who change their toothbrush in 3 months were 84% in dental, 59% in Ayurveda, and 56% in nursing students and this difference was highly significant ( $P < 0.01$ ). However, the average percentage of students who changes their toothbrush in 3 months was 66%. Subjects who were aware about correct method of brushing technique were 39% in dental, 23% in Ayurveda, and 26% in nursing students and the difference between different students was highly significant ( $P < 0.01$ ). Although, the average percentage of students who were aware about

the correct method of brushing technique were only 29% percentage of subjects who were aware about dental floss were only 18% in dental, 9% in Ayurveda, and 10% in nursing students and the difference in the behaviour between different students was highly significant ( $P < 0.01$ ). Although, the average percentage of students who were aware about the dental floss was only 35% only 35% of dental, 16% of Ayurveda, and 11% of nursing

students were aware about correct method of using mouthwash and the difference in the behaviour between different students was highly significant ( $P < 0.01$ ). Only 16% of dental, 4% of Ayurveda, and 7% of nursing students regularly visit their dentist for cleaning their teeth every 3 months and the difference in the behaviour between the students was highly significant ( $P < 0.01$ )[Table 1].

**TABLE 1 Percentage of students having knowledge about oral hygiene measures**

Questions about oral hygiene measures	Dental students (%)	Ayurveda students (%)	Nursing students (%)	Significance (P)
Frequency of brushing twice daily	71	55	50	<0.05
Frequency of changing toothbrush in 3 months	84	59	56	<0.01
Correct brushing technique	39	23	26	<0.01
Knowledge about dental floss	18	9	10	<0.01
Correct usage of mouthwash	35	16	11	<0.01
Frequency namaste of visiting the dentist in 3 months	16	4	7	<0.01
Does coffee/tea stain the teeth	39	23	26	<0.01

Only 18% of dental, 20% of Ayurveda, and 34% of nursing students were aware about the common cause of bleeding gums and the difference in the behaviour between students was highly significant ( $P < 0.01$ ). About 85% of dental, 74% of Ayurveda, and 56% of nursing students were aware that poor oral hygiene is the common cause for bad breath, and the difference in the opinion between different students was highly significant ( $P < 0.01$ ). Only 56% of dental, 43% of Ayurveda, and 49% of nursing students reported poor oral hygiene as the common cause of loosening of teeth. About 78% of dental, 64% of Ayurveda, and 70% of nursing students considered hypersensitivity as a treatable entity but the difference in opinion between the students was significant ( $P < 0.01$ ). About 94% of dental, 82% of Ayurveda, and 79% of nursing students were aware that bad oral hygiene effects general health and the difference in the behaviour between students was not significant ( $P > 0.05$ ). Subjects who reported improper tooth brushing as the common cause for receding gums were 74% in dental, 69% in Ayurveda, and 71% in nursing colleges but the difference in the behaviour between different students was not significant ( $P > 0.05$ ). 2% dental, 0% Ayurveda, and 1% nursing students have the knowledge about aggressive periodontitis [Table 2].

**TABLE 2 Percentage of students having awareness about periodontal diseases**

Questions about awareness of periodontal diseases	Dental students (%)	Ayurveda students (%)	Nursing students (%)	Significance (P)
Students having about common cause of	18	20	34	<0.01

bleeding gums				
Students having knowledge about common cause of bad breathe	85	74	56	<0.01
Students having knowledge about common cause of loose teeth	56	43	49	<0.01
Students having knowledge about dentinal hypersensitivity treatment	78	64	70	<0.01
Students having knowledge about effect of poor oral hygiene on general health	94	82	79	>0.05
Students having knowledge about common cause of receding gums	74	69	71	>0.05
Students having knowledge about aggressive periodontitis	2	0	1	>0.05

Mean awareness about the oral hygiene was found to be  $11.5 \pm 1.94$  among dental students,  $10.8 \pm 1.5$  among Ayurveda students, and  $10.5 \pm 1.7$  among nursing students while the mean knowledge about various periodontal disease was  $14.04 \pm 3.238$  among dental,  $11.67 \pm 2.39$  among Ayurveda students, and  $12.9 \pm 2.94$  among nursing students ( $P < 0.01$ ) [Table 3]

**TABLE 3 Students having overall mean knowledge about oral hygiene measures and periodontal diseases**

Dental students	11.5	1.94
Ayurveda students	10.8	1.5
Nursing students	10.5	1.7
Awareness about periodontal disease		
Dental students	14.04	3.238
Ayurveda	11.67	2.39
Nursing students	12.9	2.94

**Discussion:**

Most people are unaware of the relationship between oral hygiene and systemic diseases such as cardiovascular disease and diabetes. As a result, oral hygiene remains largely an overlooked and unrealized social issue. The focus now is on prevention rather than treatment. Therefore, good knowledge about preventative oral health and

practicing good oral hygiene become important ways to maintain good teeth. In this survey, we studied the state of consciousness of a segment of society considered to be more knowledgeable and aware than the general population.

Therefore, this survey was initiated with the main objective to determine the level of oral health awareness among nursing, dental and ayurvedic

students in goenka in Pethapur village. Although tooth brushing is a commonly used cleaning method, a lower proportion of subjects regularly brush their teeth twice a day, similar to 67% of urban Chinese adolescents in the study by Jiang et al.in 2005,<sup>17</sup> 62% of Kuwaiti adults in a study by Al-Shammari et al.2007.<sup>18</sup> The average rate of students changing their toothbrushes within 3 months is 66.3%. Dental students seemed to be more aware of the knowledge about changing toothbrushes than nursing and Ayurveda students, which was quite surprising. It is worth noting that 26% of professional students brush their teeth using a horizontal method that can affect tooth structure and gum health, which is significantly lower than the study by Zhu et al.in 2005 where 60% of the sample did the same.<sup>19</sup> In spite of being health professionals only 9%, the subjects were aware about dental floss. In contrast, Hamilton and Coulby in 1991 found that a high percentage (44%) of the sample in north eastern Ontario used dental floss.<sup>20</sup> The reason for this may be educational program that is carried out in Canada, which lacks in our society. This emphasizes the urgent need for educating and motivating the public to use this efficient method for oral health care. In contrast to this significantly higher percentage of students (73% of Ayurveda, 86% of dental, and 56% of engineering) was aware that poor oral hygiene is common cause of bad breath and most of them (80% Ayurveda, 94dental, and 80% nursing students) were aware that bad oral hygiene effects general health and the results obtained were better compared to the study conducted by Ali et al.in 2012 (81%) in Karachi.<sup>21</sup> Very less students visits regularly their dentist for cleaning their teeth in 3 months though a comparatively higher number of professionals (43%) visited dentist over a period of 1 year, which was in par with the studies by Behbehani and Shah (49%),<sup>22</sup> Petersen et al.(37%)<sup>23</sup>, and Al-Hussaini et al.(44%),<sup>24</sup> but better than the study conducted by Johani (12.8%).<sup>25</sup> Our survey results surprisingly revealed that well-trained professionals will become the foundation of our modern society nowhere better than the rest of the general population to rely on their educational knowledge while some results can be given by students a intentional way. However, the level of awareness and knowledge about oral health and dental diseases among these professionals is not encouraging.

### Conclusion:

The standard of oral health awareness in India is very poor with a majority of the population affected by poor socio-economic conditions and many have never even visited a dentist.

The results obtained in our survey are eye-opening for dental colleges not only in the Pethapur region but also across the country. From the survey results, we conclude that the level of awareness among professional students in the field of dentistry, Ayurvedic and nursing is insufficient and presents a sad picture. As dentists, we must continue to emphasize the importance of correcting all aspects of brushing and flossing as well as the importance of regular checkups. This mission of spreading awareness must extend beyond our clinics to the general population, including students, workers and laypeople, and even professional students

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