

# Assessment of Oral Hygiene Status, Oral Health Attitude and Behavior among Dental Students - A Cross Sectional Study

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**Abstract:** ***Aims and objectives:** The awareness of oral hygiene and the attitude towards oral hygiene practice differs from individual to individual and also between professionals. This study aims at evaluating the awareness and attitude towards oral hygiene practice amongst dental students. This was carried out among the students of Pacific Dental College and Hospital, Udaipur. A questionnaire survey was distributed among clinical and preclinical student along with oral hygiene status which was assessed using pomshedlay index 1976. Results of the study shows no significant difference between the oral health attitudes; behavior and oral hygiene status of male & female dental student's when comparison was done between clinical students and pre-clinical students clinical students have significantly better attitude, behavior & oral hygiene .*

**Keyword:** Oral health, dental professionals, oral hygiene practices and preventive care

## 1. Introduction

The prevention of oral disease is the most acknowledged and efficient method of ensuring oral health.[1] Oral health is now renowned to be equally important in relation to general health.[2] .It has been found that health-care providers exhibit a positive attitude toward oral health and dental care.[3] Health-care provider's oral health attitudes developing during the undergraduate training reflect their generous importance of disease prevention and their commitment to improving their patient's oral health. Therefore, positive oral health attitudes should be taught and reinforced during undergraduate training.

## 2. Aims and Objectives

The awareness of oral hygiene and the attitude towards oral hygiene practice differs from individual to individual and also between professionals. This study aims at evaluating the awareness and attitude towards oral hygiene practice amongst dental students. This was carried out among the students of Pacific Dental College and Hospital, Udaipur.

## 3. Material and Methods

This was a cross- sectional questionnaire Study conducted to assess the oral hygiene status, oral Health attitude and behavior among dental students.

## 4. Source of Data

Students of pacific dental college were included in the study.

|   |   |     |    |
|---|---|-----|----|
| 1 | Do you think that regular dental check up is necessary to maintain oral hygiene?                                  | Yes | No |
| 2 | Do you think that smoking is injurious to oral health?  |     |    |
| 3 | Do you think that use of mouthwash /tooth floss/ inter dental brush along with tooth brushing is more beneficial? |     |    |

|    |  |  |  |
|----|--|--|--|
| 4  | Do you think that regular oral prophylaxis does not cause loosening of teeth?                                |  |  |
| 5  | Do you think brushing twice a day is necessary?  |  |  |
| 6  | Do you know that acidic beverages (cola drinks) can cause tooth demineralization?                            |  |  |
| 7  | Do you know about importance of sugar free chewing gum?  |  |  |
| 8  | Do you know about the advantages of pro-biotic drinks over acidic drinks?                                    |  |  |
| 9  | Do you know that sticky & refined food products (chips, chocolate, burgers etc) are harmful for oral health? |  |  |
| 10 | Do you know in-between snacking is harmful for your hygiene?   |  |  |
| 11 | Do you go for regular dental checkup (biannually)?   |  |  |
| 12 | Do you smoke?  |  |  |
| 13 | Do you use mouthwash /tooth floss/ inter dental brush along with regular tooth brushing?                     |  |  |
| 14 | Do you have any bad experience after oral prophylaxis?   |  |  |
| 15 | Do you brush twice a day?  |  |  |
| 16 | Do you drink acidic beverages (cold drink) more than twice a week?   |  |  |
| 17 | Do you prefer to chew a sugar free chewing gum over flavored chewing gum?                                    |  |  |
| 18 | Have you ever ask your dentist about correct brushing technique For you?                                     |  |  |
| 19 | Do you brush your teeth before going to sleep?   |  |  |
| 20 | Do you want to attend a demonstration class on tooth brushing technique?                                     |  |  |

## 5. Questionnaire for Survey

**Patient Hygiene Performance Index- By Podshadley 1976**

### Determining the Php Score Armamentarium

- Mouth Mirror
- Disclosing Agent
- Explorer

The examination is performed on the following teeth in this order:

(A) 16,(B) 11, (C) 26, (D) 46 ,(E)31(F) 36

The tooth surfaces which are assessed:

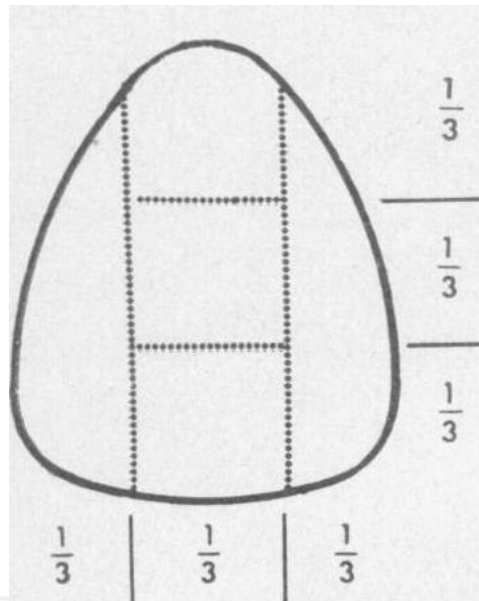
- (B) Buccal of the maxillary molars
- (C) Lingual of the mandibular molars,
- (D) Labial of the maxillary and mandibular incisors

Scoring Criteria

If no debris is present- 0

Debris is present- 1

The debris score for each tooth is determined by adding the values of each of the five subdivisions



## 6. Examination



Tooth no.16



Toothno.11



Toothno.26



Toothno 46



Tooth no.31



Tooth no 36

## 7. Results

A total of 310 students from both preclinical and clinical years participated in the study. all the questionnaires were returned after the completion and were analyzed the sample description of both preclinical and clinical undergraduate dental students is given in table 1 clinical students have significantly better attitude ,behavior & oral hygiene as compared to pre clinical students table 2.

The difference in the attitude ,behavior and oral hygiene status between different academic years is significant table 3 post hoc tests lsd shows that attitude level towards oral hygiene increases significantly from first to final year table 4.

Independent t - test shows 3<sup>rd</sup> year dental students shown to have better behavior level as compared to other academic years. Difference was not significant between other academic years table 5 independent t – test shows that 3<sup>rd</sup> year dental students shown to have significantly better oral hygiene as compared to other academic years Table 6 The **SPSS®** statistical program (SPSS,CHICAGO, USA) was used to process and analyze the data independent sample

**T-TEST** used to compare the attitude, behavior and oral hygiene status between male, female as well as clinical & pre clinical dental students .

**POST HOC LSD test** was used to evaluate the attitude, behavior and oral hygiene status between different academic years

**The table no.1 represents comparison between the male & female students oral health attitude, behavior and oral hygiene status of male & female dental students**

|          | Gender | N   | MEAN  | P     | SD   |
|----------|--------|-----|-------|-------|------|
| Attitude | Male   | 104 | 7.76  | 0.63  | 1.61 |
|          | Female | 206 | 7.85  |       | 1.64 |
| Behavior | Male   | 104 | 6.63  | 0.307 | 2.01 |
|          | Female | 206 | 6.87  |       | 1.91 |
| Ohs      | Male   | 104 | 2.063 | 0.975 | 1.83 |
|          | Female | 206 | 2.067 |       | 1.77 |

DATA IS SIGNIFICANT AT P = 0.05

There is no significant difference between the oral health attitude, behavior and oral hygiene status of male & female dental students

### Comparison between preclinical & clinical students table 2

|          | Category     | N   | MEAN  | P     |
|----------|--------------|-----|-------|-------|
| Attitude | Pre Clinical | 136 | 7.24  | 0     |
|          | Clinical     | 174 | 8.28  |       |
| Behavior | Pre Clinical | 136 | 6.5   | 0.018 |
|          | Clinical     | 174 | 7.02  |       |
| OHS      | Pre Clinical | 136 | 1.88  | 0.019 |
|          | Clinical     | 174 | 2.205 |       |

DATA IS SIGNIFICANT AT P = 0.05

Clinical students have significantly better attitude ,behavior & oral hygiene as compare to pre clinical students

### Comparison between different academic years table 3

|          | Academic year   | N  | MEAN | P     |
|----------|-----------------|----|------|-------|
| Attitude | 1 <sup>st</sup> | 81 | 7.21 | 0     |
|          | 2 <sup>nd</sup> | 55 | 7.27 |       |
|          | 3 <sup>rd</sup> | 97 | 8    |       |
|          | 4 <sup>th</sup> | 77 | 8.64 |       |
| Behavior | 1 <sup>st</sup> | 81 | 6.41 | 0.017 |
|          | 2 <sup>nd</sup> | 55 | 6.64 |       |
|          | 3 <sup>rd</sup> | 97 | 7.29 |       |
|          | 4 <sup>th</sup> | 77 | 6.69 |       |
| OHS      | 1 <sup>st</sup> | 81 | 2.01 | 0.004 |
|          | 2 <sup>nd</sup> | 55 | 1.7  |       |
|          | 3 <sup>rd</sup> | 97 | 2.38 |       |
|          | 4 <sup>th</sup> | 77 | 1.97 |       |

The difference in the attitude ,behavior and oral hygiene status between different academic years is significant

### Post hoc lsd test on attitude level increases significantly from first to final year table 4

| Dependent Variable | (I) YEAR | (J) YEAR | Mean Difference (I-J) | Sig.  |
|--------------------|----------|----------|-----------------------|-------|
| ATTITUDE           | 1        | 2        | -.0629                | .815  |
|                    |          | 3        | -.79*                 | .001  |
|                    | 1        | 4        | -1.43*                | .000  |
|                    |          | 2        | 3                     | -.73* |
|                    | 2        | 4        | -1.36*                | .000  |
|                    |          | 3        | 4                     | -.64* |

Level increases significantly from first to final year



**Independent t - test table 5**

| Dependent Variable | (I) YEAR | (J) YEAR | Mean Difference (I-J) | Sig. |
|--------------------|----------|----------|-----------------------|------|
| Behavior           | 1        | 2        | -.23                  | .495 |
|                    | 1        | 3        | -.88*                 | .002 |
|                    | 1        | 4        | -.28                  | .358 |
|                    | 2        | 3        | -.65*                 | .045 |
|                    | 2        | 4        | -.0519                | .878 |
|                    | 3        | 4        | .60*                  | .041 |

Independent t – test shows that 3<sup>rd</sup> year dental students shown to have significantly better oral hygiene as compared to other academic years

**Independent T - test table 6**

| Dependent Variable | (I) YEAR | (J) YEAR | Mean Difference (I-J) | Sig. |
|--------------------|----------|----------|-----------------------|------|
| OHS                | 1        | 2        | .312                  | .125 |
|                    | 1        | 3        | -.371*                | .034 |
|                    | 1        | 4        | .0356                 | .847 |
|                    | 2        | 3        | -.683*                | .001 |
|                    | 2        | 4        | -.276                 | .179 |
|                    | 3        | 4        | .407*                 | .022 |

3<sup>rd</sup> year dental students shown to have significantly better oral hygiene as compare to other academic years

## 8. Discussion

As a major part of their role in the oral-health-care provision, dentists are considered experts in the field of oral-health education and promotion. The first step in establishing a positive oral-health habit is to provide significant knowledge to the patients and to raise their awareness regarding the ways to prevent oral diseases. High awareness regarding oral self-care among dental students enables them to assess their patients' oral health condition and to motivate their patients and may help them to spread oral awareness in the general population.[4,5, 6]

The result of present study show that there is no significant difference between the oral health attitude, behavior and oral hygiene status of male & female dental students

percentage score for oral-health knowledge, attitude, and behavior of clinical students were significantly higher than that of the preclinical students, which agrees with the results of some previous studies by Kawamura *et al.*,[7] Tseveenjav *et al.*,[5] and Rong *et al.*[8]

Comparison between different academic years the difference in the attitude, behavior and oral hygiene status between different academic years is statically significant 3<sup>rd</sup> year dental students shown to have better behavior level as compare to other academic years. difference was not significant between other academic years .

Preventive dentistry and periodontology are taught in the 3<sup>rd</sup> year of dental studies, so the difference in the knowledge, attitude, and behaviour percentages of preclinical and clinical dental students appears to reflect the variation in the student's educational level.(9)

## 9. Conclusion

The findings of present study highlights that the students had rather low oral-health awareness in the beginning of their dental education, i.e., preclinical students has low oral-health awareness when compared to clinical students. The oral-health attitude and behavior of dental students improved with the increase in the level of education.

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