Oral Hygiene Status and Gingivitis among Undergraduate Dental Students- A Descriptive Survey

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ABSTRACT

The importance of personal hygiene is a very variable concept for every individual and the routines for its maintenance frequently differ from person to person. Dentist's attitudes toward their oral health have been found to affect the quality of care delivered to their patients. Incorporating good oral hygiene attitudes into dental students early during their under graduate years will help ensure that they inculcate these into their everyday routines throughout their lives. Researchers have found oral health attitudes and behaviors among dental students to be different in their pre-clinical and clinical years.

Gingivitis has been seen to be one of the most predominant dental maladies affecting the general population. The aim of this study was to assess the prevalence of Gingivitis among dental students. In the current study, Oral Hygiene Index Simplified, and Gingival Index were used to assess the oral hygiene status of 500 dental students. Results showed 87.8 % (439) had good oral hygiene , 9 %(45) had fair oral hygiene and 3.2 %(16) had poor oral hygiene. About 85% (425) of the participants reported mild gingivitis, 10%(50) of the participants had moderate gingivitis and 5% (25) of the study subjects suffered from severe gingivitis. It was also found male dental students had higher bleeding and worse hygiene as compared to the female dental students.

Keywords- *Oral hygiene, Gingivitis, Dental students*

INTRODUCTION

The importance of personal hygiene is a very variable concept for every individual and the routines for its maintenance frequently differ from person to person. It can be assumed that maintenance of good personal hygiene is evidence of good discipline, and its importance is of paramount significance in the present ability of any individual. Dental hygiene maintenance is a very important part of the overall package. Dentists attitudes toward their oral health have been found to affect the quality of care delivered to their patients[1].Incorporating good oral hygiene attitudes into dental students early during their under graduate years will help ensure that they inculcate these into their everyday routine throughout their lives. Researchers have found oral health attitudes and behaviors among dental students to be different in their pre-clinical and clinical years[2].

Gingivitis has been found to be one of the most common dental maladies affecting the general population in developing countries like India[3].The aim of this study was to assess the prevalence of Gingivitis among dental students.

Aims and Objectives

To assess the prevalence of Gingivitis among dental students

MATERIALS AND METHODS

The study design was a cross sectional type of descriptive study. 500 dental BDS students were included in this study to assess their gingival health status.

Gingivitis was assessed using Gingival Index by Loe H and Silness and Simplified Oral Hygiene Index by John C Greene and Jack R Vermillion.

The study sample excluded:

- Subjects with any systemic disorders and diseases
- Subjects on antibiotic therapy six months prior to the study
- Subjects who have undergone periodontal therapy six months prior to the study
- Smokers

Simplified Oral Hygiene Index
Debris index simplified:

1. No debris or stains present.
2. Soft debris covering not more than one third of the tooth surface, or presence of extrinsic stains without other debris regardless of surface area covered.
3. Soft debris covering more than one third, but not more than two thirds, of the exposed tooth surface.
4. Soft debris covering more than two thirds of the exposed tooth surface.

Calculus Index Simplified:

1. No calculus present
2. Supragingival Calculus covering not more than one third of the exposed tooth surface.
3. Supragingival Calculus covering more than one third but not more than two thirds of the exposed tooth surface or the presence of individual flecks of Subgingival Calculus

around the cervical portion of the tooth or both

4. Supragingival Calculus covering more than two third of the exposed tooth surface or a continuous heavy band of Subgingival Calculus around the cervical portion of the tooth or both.

Calculation of DI-S score = $\dfrac{\text{Total score}}{\text{No. of surfaces examined}}$

Calculation of CI-S score = $\dfrac{\text{Total score}}{\text{No. of surfaces examined}}$

Once the DI-S and CI-S are calculated separately, then they are combined or added together for the OHI-S.

OHI-S = DI -S + CI - S

The DI-S and CI-S values range from 0 to 3, which can be interpreted as:

Good -   0.0 to 0.6

Fair -   0.7 to 1.8

Poor -   1.9 to 3.0

The OHI-S value ranges from 0 to 6, which can be interpreted as:

Good -   0.0 to 1.2

Fair -   1.3 to 3.0

Poor -   3.1 to 6.0

Gingival Index:

1. Absence of inflammation/normal gingiva

2. Mild inflammation- Slight change in color, slight edema; no bleeding on probing

3. Moderate inflammation- Moderate glazing, Redness, edema and Hypertrophy, bleeding on probing.

4. Severe inflammation- Marked redness and Hypertrophy, Ulceration, Tendency to spontaneous bleeding.

Students were given the option of discontinuing at any time. The data was coded and analyzed using the SPSS version 11.5.The level of statistical significance will be kept at $p < 0.05$.

RESULTS

The present cross sectional study was undertaken among 500 undergraduate dental students. The response rate was 100 %. All the subjects were willing to undergo oral health examination. Results showed 87.8 % (439) had good oral hygiene, 9 % (45) had fair oral hygiene and 3.2 % (16) had poor oral hygiene (Graph 1). About 85% (425) of the participants reported mild gingivitis, 10% (50) of the participants had moderate gingivitis and 5% (25) of the study subjects suffered from severe gingivitis (Graph 2). It was also found male students had higher bleeding and worse hygiene than female students (Table 1) and the results were statistically significant.
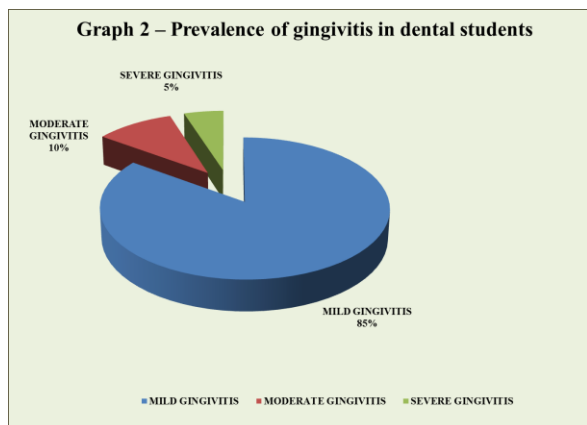
GRAPHS AND TABLES

Graph 1 – Oral hygiene status of dental students

Graph 2 – Prevalence of gingivitis in dental students
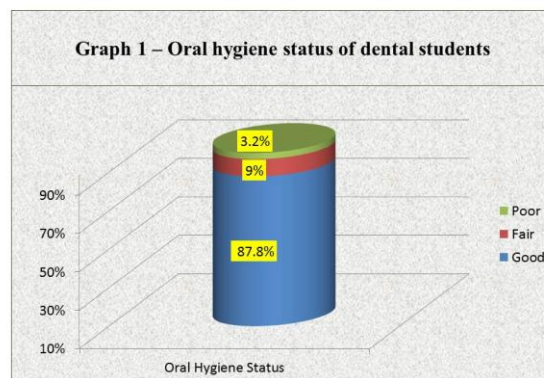
Table 1 showing descriptive statistics of OHIS and GI its relationship between gender.

GENDER	OHIS (MEAN±SD)	GI (MEAN±SD)
Male 185 (36.9%)	0.89±1.03	0.73±0.73
Female 316 (63.1%)	0.71±0.73	0.53±0.55
P value	0.03*	0.01*

*Statistically significant

DISCUSSION

Dental students are more aware about their oral hygiene and should be good examples to their families and friends. In the current study, Oral Hygiene Index Simplified, and Gingival Index were used to assess the oral hygiene status of 500 dental students. Results showed 87.8 % (439) had good oral hygiene, 9 % (45) had fair oral hygiene and 3.2% (16) had poor oral hygiene (Graph 1).

Loe and Silness index was used as it gives the severity of the gingivitis. About 85% (425) of the participants reported mild gingivitis ,10% (50) of the participants had moderate gingivitis and 5% (25) of the study subjects suffered from severe gingivitis(Graph 2). It was also found male dental students had higher bleeding and worse hygiene as compared to the female dental students. The overall oral hygiene status among the dental students in this study was good.

In agreement with the results of Fukai[4] and Ostberg [5], in this study it was also found that females had better oral hygiene compared to male dental students.

CONCLUSION

The overall oral hygiene status among the dental students in this study was good . This study also showed that female dental students had better oral hygiene compared to their male colleagues. More emphasis should be given on the importance of maintaining good oral hygiene to dental students.

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