



Comparison of Oral Health Status between First and Final Year BDS Students: A Cross-Sectional Study

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Abstract

Background: Oral health is extremely crucial in the overall well-being of an individual. Knowledge and awareness about oral health and its importance plays a pivotal role in implementation of oral hygiene practices.

Aim: To study the impact of oral health education which students received during their formal education period in their own field on their personal oral hygiene.

Materials and Methods: A sum total of 60 students with an age range between 19 and 26 were included in the study. Based on their year of study in the college, they were grouped as first year and final year students. Plaque index was recorded for each and every one of them. Following that a questionnaire was given to them for the assessment of their oral hygiene practices.

Result: Significant difference was noted in the oral hygiene status between the first and final year student

Conclusion: Knowledge of oral health education plays a vital role for maintenance of personal oral hygiene.

Keywords: Education; Hospital; Oral Hygiene Status; Students

Introduction

Oral health status is the major component for overall health. Oral health education plays a major role for determining oral health status of individuals. Periodontitis is defined as "an inflammatory disease of the supporting tissues of the teeth caused by specific microorganisms or group of micro-organisms resulting in progressive destruction of periodontal ligament and alveolar bone with pocket formation, recession or both" [1]. Recent evidence suggests that poor oral health status influences systemic disorders, such as cardiovascular disease, diabetes mellitus [2,3]. So that, reinforcement on regular oral check-ups and education for students is considered necessary to prevent not only oral diseases but also systemic diseases [4,5]. The present study was done to determine whether dental students who were receiving oral health education are conscious about their oral hygiene status or not. Knowledge is

only fruitful when you apply it in your day to day life. Since first year BDS (Bachelor of Dental Surgery) students were freshly enrolled and receive oral health education, the aim of the study was to compare the oral hygiene status between the two groups and to determine the effect of oral health education on the oral hygiene practices.

Materials and Methods

This is a cross-sectional study done between first year and final year BDS students studying in M B Kedia dental college, Birgunj Nepal. Total number students participating in the study were 60 in number, and were divided into two groups of 30 each based on their year of study. All the clinically healthy individuals, with the absence of any disease were included in the study. Any debilitated individuals and the ones with form of tobacco habits were excluded from the study. The ethical clearance was obtained from

institutional review committee. The Plaque index was used for the presence of plaque. The scoring criteria for plaque index 0 score for no plaque, 1 score for a film of plaque adhering to the free gingival margin and adjacent area of the tooth, which cannot be seen with the naked eye. But only by using disclosing solution or by using probe. 2 score for moderate accumulation of deposits within the gingival pocket, on the gingival margin and/or adjacent tooth surface, which can be seen with the naked eye. 3 score for abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin [1]. The score was calculated and interpreted as 0.1 - 0.9 good, 1.0 - 1.9 as fair, 2.0 - 3.0 as poor (according to Silness and Loe) [1].

The clinical periodontal examinations were carried out manually using UNC-15 probe (Hu-Friedy, IL, USA). The Clinical Attachment Loss (CAL) and PD were measured in 4 sites (mesial-facial, mid-facial, distal-facial and palatal/lingual) per tooth. All the clinical data were collected by a single investigator. After clinical examination, the patients were given self-reporting questionnaires to collect data on their awareness of oral hygiene measures and current oral hygiene practices.

The collected data were analyzed and the results were presented in numbers and percentages.

Results

A sum total of 60 students (30 each of first year and final year BDS students) participated in the study. Mean age group for first year students were 19 ± 3 and mean age group for final year student were 23 ± 3 . Among first year students total number of female and male students were 23 and 7 respectively while in final year total number of male to female number were 19 and 11 respectively. Comparison of plaque index (Table 1) showed significant difference between the first and the final year BDS students. Comparison of oral hygiene practices between the first and the final year BDS students (Table 2) revealed that there is a substantial differences in the oral hygiene practices between them. We also found that 70% of the first year BDS students never visited a dentist in their lifetime, whereas each and every final year students have gone for a dentist consultation after joining the BDS course.

Plaque index	First year group	Final year group
Good	57%	74%
Fair	32%	25%
Poor	11%	1%

Table 1: Plaque index.

	Brushing/day		Use of Interdental aids		Visit to the dentist		Oral prophylaxis		
	Once	Twice	Yes	No	Yes	No	Never	1 - 2 times	> 2 times
First year BDS students	87%	13%	12.5%	87.5%	30%	70%	70%	28%	2%
Final year BDS students	9%	91%	39%	61%	100%	0%	0%	12%	88%

Table 2: Comparison of oral hygiene practices between the first and the final year BDS students of M.B. Kedia Dental College, Birgunj, Nepal.

Discussion

In the present study we have comprehensively investigated the plaque index of the first year and final year BDS students from the M.B. Kedia Dental College, Birgunj, Nepal.

We have found out statistically significant difference in the plaque index between the first and final year BDS students. But substantial difference in the overall oral hygiene status was noted between the first and the final year BDS students. The results can henceforth be correlated that the increase in knowledge and the awareness about oral health makes an overall impact on the oral

hygiene status of an individual. The oral hygiene status was good in 57% of the first year BDS students, whereas 74% of the final year BDS students showed good oral hygiene.

Furthermore, we have also recorded various oral hygiene practices of the first and final year BDS students through a prepared questionnaire. We have noted the brushing habits, use of dental floss, dental visits. We have also recorded if they have undergone oral prophylaxis in their lifetime or not. It has been found that only 13% of the first year BDS students brushes their tooth twice daily, whereas 91% of the final year BDS students brushes their tooth twice daily.

Usage of dental floss was noted in 12.5% and 39% of first and final year BDS students respectively. Only 30% of the first year BDS students have visited a dentist before enrolling for the BDS programme, whereas each and every final year BDS students have visited a dentist after joining the BDS programme.

70% of the first year students have never undergone oral prophylaxis before, but the percentage of students who have undergone oral prophylaxis increases in final year group. About 12% of the final year students have undergone oral prophylaxis 1 - 2 times and about 88% of the final year students have undergone oral prophylaxis more than two times.

From the above mentioned data we can conclude that oral health education has an impact on the adoption of oral hygiene measures which ultimately affects the overall oral hygiene status of the individual. It has been observed that the oral health was not given priority by the first year BDS students, when compared to the final year BDS students.

In the year 2008 Piperakis SM conducted a study to evaluate the knowledge, attitude and behavior of Greek elementary school students about oral health and dental care. They found out that irregular brushing habits was common, in addition to that adequate parental supervision about the oral health care was missing [5]. The authors concluded that optimal oral health education is mandatory for the improvement of knowledge, attitude and behavior about dental health care which was similar to study done by Kawamura M., *et al* [6].

In the year 2010 a study was conducted by CH Chu., *et al.* to compare the knowledge about dietary behavior and its association in Chinese adults and they concluded that oral health education is an essential for making the general public understand about dental erosion and its deleterious effects [4] which was similar to studies done by different authors [7-10].

To the best of our knowledge, no other studies has been conducted on the comparison of oral health education and oral hygiene status of the dental students of first and final year. Through this study we made an attempt to emphasize the importance of oral health education on the overall oral hygiene status of an individual and we have found a positive correlation about the same.

The only shortcoming in our study is the small sample size and we could not do much because of the lack of availability of other dental colleges in our city.

Conclusion

The knowledge and awareness of about oral health makes an impact on the overall oral hygiene of an individual. Many systemic diseases often presents with an oral manifestation as its first symptom. Therefore any abnormality in the oral cavity mandates an immediate visit to the dentist for accurate diagnosis and optimal management.

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