Periodontic course effects on knowledge, attitude, and practice of dentistry students and its impact on mouth and dental care

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ABSTRACT

Background *In the field of education, a great deal of quality improvement is remained to be achieved. Assessment of educational courses appears to be necessary for quality improvement in all curriculums, therefore studies for assessment of educational outcomes and impacts are of high priority. In a dentistry faculty, the mouth and dental health care among dentistry students can be considered as a potential indicator of students' educational achievement.*

Purpose *To study knowledge, attitude and practice impact on mouth and dental health care among dentistry faculty students both before and after passing practical periodontic courses in Shahed University of Medical Sciences during academic year 2001-2002*

Methods *In this cross-sectional study 140 students of dentistry faculty of Shahed University of Medical Sciences took part. Necessary data were collected by means of a questionnaire. Knowledge of the subjects on mouth and dental health care were assessed by 10 close-ended questions and their attitude on mouth and dental health care were assessed by 5 Likert scale questions. Assessment of practice was performed in a 3-step researcher–administrated interview.*

Results *Demographic data gathered via questionnaires indicated that 49.6 % (64 students) of the students who took part in the study were male and 50.4% (65 students) were female. Of our participants, 59.7% were admitted through Shahed quota, while the rest were admitted through free quota. There was no significant difference in students' knowledge, attitude and practice on mouth and dental health care between the students who had not passed practical courses in periodontics and those who had passed these courses.*

Conclusions *There was no significant association between knowledge, attitude and practice on mouth and dental health care and passing practical courses in periodontics among dentistry faculty students in Shahed University of Medical Science. Our results suggest that students' practice on mouth and dental health care might be affected by other factors like mass media, but quality of periodontic courses and practical courses in periodontics should be improved as these courses can promote knowledge, attitude and practice impact on the dentistry students, mouth and dental health care.*

Key Words *KNOWLEDGE, ATTITUDE, PRACTICE, PRACTICAL COURSE, PERIODONTICS, MOUTH AND DENTAL HEALTH CARE*

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Introduction

In the field of education, a great deal of quality improvement is remained to be achieved (1). Rajaee showed that students' academic achievement ranged from 15% to 88.9% (2).

It was hoped that growing usage of multi-media-based educational technologies, careful selection of trainers, improvements of educational contents and methods, improvement of trainers' teaching skills and increasing students' motivation lead to educational quality improvement (3).

Assessment of educational courses is considered to have a critical role for quality improvement in all curriculums, therefore, studies for assessment of educational impact is highly needed specially in an academic setting. Educational programs success in improving students' academic achievement have been reported to range from 33% to 57% (4).

It is supposed that the mouth and dental health

care among dentistry students can be considered a potential indicator of students' academic achievement in periodontic practical courses.

To the best of our knowledge, study of competencies (K.A.P. knowledge, attitude and practice) of dentistry students on mouth and dental health care by evaluation of mouth and dental health care among dentistry students has not been performed before, thus, this survey was undertaken to measure dentistry students' knowledge, attitude and practice impact on mouth and dental health care among the students who have not passed practical courses (students of 6th semester), students who passed periodontic practical course I (students of 8th semester), those who passed practical courses I and II (students of 9th semester) and the students who passed practical courses I, II and III (students of 11th semester) . In addition, this paper is intended to provide an introduction to some of the important ideas associated with the concepts of K.A.P assessment.

Materials and Methods

In this cross-sectional study 140 students of dentistry faculty of Shahed University of Medical Sciences from 6th semester (students who have not passed periodontic practical courses), 8th semester (students who have passed practical course I in periodontology), 9th semester and 11th semester took part. The students who participated in the study were grouped according to practical courses that they had passed. The list of the students was derived from registration documents and records.

A Researcher-designed questionnaire was utilized in this study. Questions to obtain necessary demographic information were included at the top of the questionnaire.

Knowledge of the subjects on mouth and dental health care were assessed by 10 close-ended questions and their attitude on mouth and dental health care were assessed by 5 Likert scale questions. The impact of subjects' practice on mouth and dental health care were assessed through measurement of gingival index and measurement of oral hygiene index-implified. The subjects of the study also were asked to select the toothbrush that they thought to be the best among 7 tooth-brushes. Then, they were asked about the reason of the selections. Students' tooth-brushing techniques were assessed as a part of the evaluation of their practice on mouth and dental health care. The knowledge section contained 10 multiple-choice questions that had only one correct answer. The full knowledge score was 10. The attitude questions were in Likert format, with the choices of strongly agree, agree, disagree, and strongly disagree. The possible points ranged from 0 to 3, with 3 being the most positive and 0 being the most negative. The possible range of scores for the attitude questions was 0 to 15.

Assessment of practice was performed in a 3-step researcher–administrated interview. First O.H.I-S index and gingival index were measured for each subject. Then, students' tooth-brushing techniques were evaluated through comparison of the their techniques and standard techniques such as "bass", "modify bass" and "charter".

As the third step in assessment of the subject's practice on mouth and dental health care, the students were asked to select one toothbrush that they thought to be the best one among 7 tooth-brushes. All trademarks on toothbrushes have been cleaned previously. They were also asked to explain why they had selected the chosen toothbrush as the best one, then the reasons, were implied for calculating their practice scores (5). Maximum possible overall score for the students' practice was 10.

Subjects were grouped under the categories of students with the lowest low knowledge score (0<=knowledge score<2.5), students with low knowledge score (2.5< knowledge score<= 5), students with moderate knowledge score (5<=knowledge score < 7.5) and students with high knowledge score (7.5< knowledge score < =10).

The scoring system for the attitude questionnaire was designed so that the scores between 0 and 3.99 indicated the lowest low level of positive attitude, the scores between 4 and 7.99 indicated the low level of positive attitude, the scores between 8 and 10.99 indicated the intermediate level of positive attitude and the scores between 10.99 and 15 indicated the high level of positive attitude.

The students' Practice scores were categorized as follows: the scores between 0 and 2.49 indicated the lowest low level of practice, the scores between 2.50 and 4.99 indicated low level of practice, the scores between 4.99 and 7.49 indicated intermediate moderate level of practice, and the scores between 7.50 and 10 indicated high level of practice.

Results

Of 140 students, 130 students who had inclusion criteria participated in the survey and one student was later excluded because of incomplete data on his practice. Thus the sample of the subjects was composed of 129 students. Demographic data

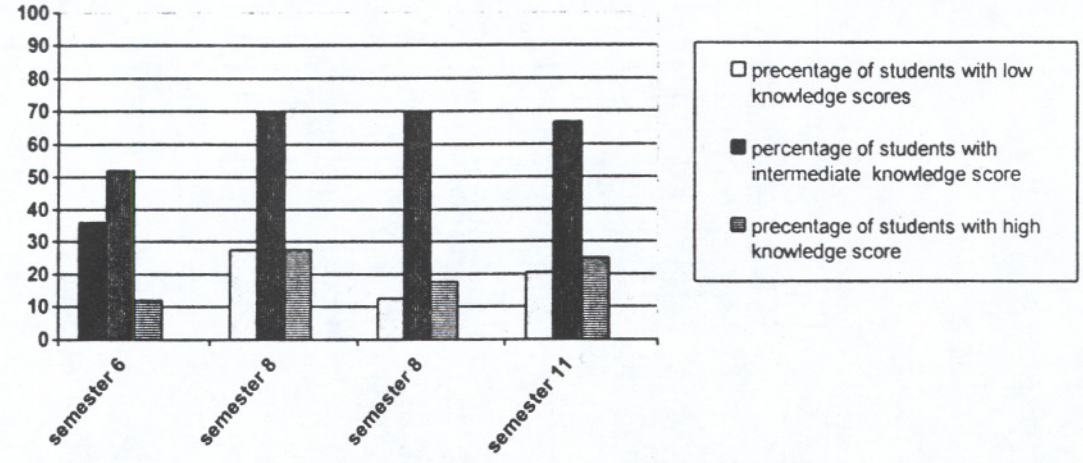

FIGURE 1 KNOWLEDGE ON MOUTH AND DENTAL HEALTH CARE AMONG DENTISTRY STUDENTS IN EACH SEMESTER

* The students with the lowest low level of positive attitude: 0%

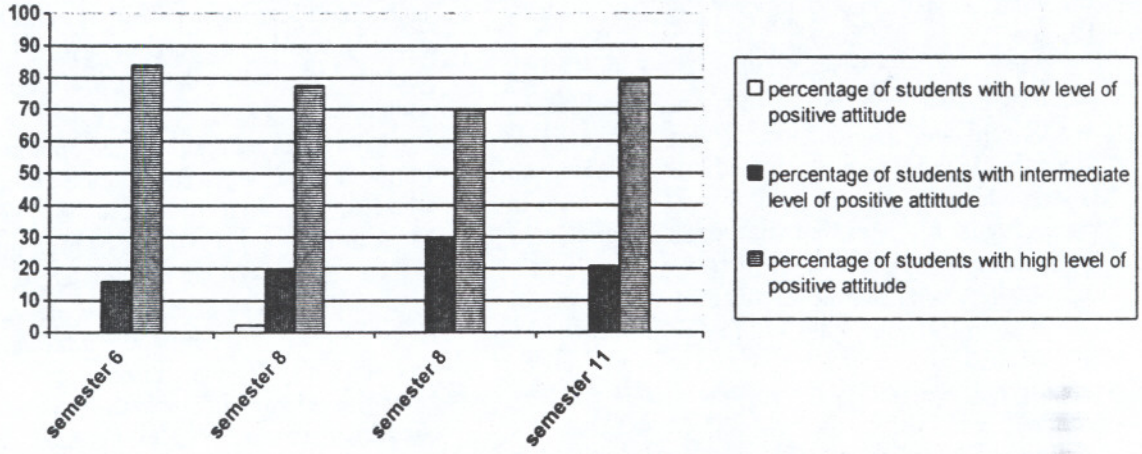

FIGURE 2 ATTITUDE TOWARD MOUTH AND DENTAL HEALTH CARE AMONG DENTISTRY STUDENTS IN EACH SEMESTER

* The students with the lowest low level of positive attitude: 0%

gathered via questionnaires indicated that 49.6% (64 students) of the students enrolled in the study were male and 50.4% (65 students) were female. Their admission to the university was 59.7% through Shahed quota and 40.3 % through free quota.

Among the students 27.1% had graduated from high schools in Tehran and 72.9% had graduated from high schools in other districts. Most of the subjects were single (72.1%) and 27.9 % were married.

About 25 students (19.4%) had not passed priodontic practical courses and therefore have not been trained in the field of mouth and dental health care academically yet (students of 6th semester), 40 students (31%) had passed practical course I (students of 8th semester), 40 students(31%) had passed practical courses I and II in periodontology (students of 9th semester) and 24 students (18.6%) had passed practical courses I, II and III (students of 11th semester) .

Students who had high knowledge scores ranged from 12% to 27.5% of total number of subjects among four groups of the students as shown in Figure 1. There was no significant difference in students' knowledge on mouth and dental health care between the students who had not passed practical courses and those who had passed these courses.

Among those who had not passed practical courses, 84% had high attitude scores while 79.1% of the students who had passed all practical courses (I, II , III) had high attitude scores (Figure 2).

There was no significant correlation between passing practical courses and obtaining better attitude scores by the students.

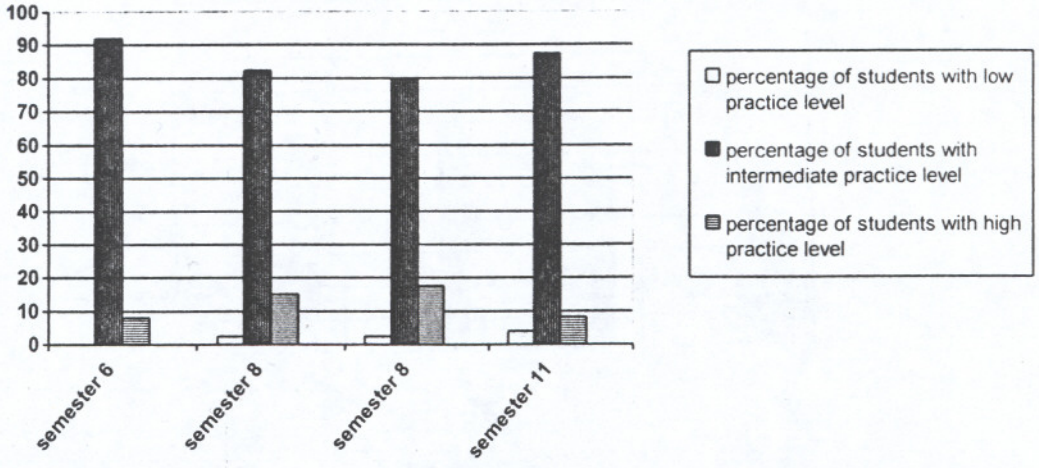

FIGURE 3 STUDENTS' PRACTICE IMPACT ON MOUTH AND DENTAL HEALTH CARE IN EACH SEMESTER

There was also no significant correlation between passing periodontic practical courses and obtaining higher practice scores by the students (Figure 3).

Although there was no significant correlation between the students' K.A.P on mouth and dental health care and the location of the high schools where participants were graduated, the students who have graduated from high schools in Tehran tend to have a higher K.A.P score than those who graduated from the high schools in other districts.

Finally, there was no significant difference in K.A.P scores between male and female students.

Discussion

Our findings indicated that there is no significant association between knowledge, attitude and practice impact on mouth and dental health care and passing periodontic practical courses among dentistry faculty students in Shahed University of Medical Sciences.

Pour Asghar showed that dentists who worked in Rasht and Bandar Anzali had high knowledge level on mouth and dental health care and also had positive attitude toward mouth and dental health care , but their practice impact on the mouth and dental health care was not acceptable according to the criteria determined in the survey(6).

Shahravan showed that knowledge and practice of the dentistry students on mouth health care would not improve in concordance with their educational progress during the period of the curriculum (7).

Padisar reported high level of concordance between improvement of mouth and dental health care among dentistry students and their educational progress across the curriculum, through a survey based on measuring P.I (plaque index) and C.I (calculus index) (8).

Hyock-soo Moon et al. showed that the knowledge on prevention and health care among the male dentists and the dentists who had graduated recently was higher in comparison with the female dentists and the dentists who had graduated sometime ago (9).

Ripa reported that practice on educating patients for mouth and dental health care among the dentists who had graduated from New York dentistry school between 1977 and 1990 was of high quality (10).

To extend of our knowledge, all pervious studies that have studied the dentistry students' K.A.P impact on mouth and dental health care, have assessed K.A.P via distributing questionnaires among students but in the current study, we conducted researcher-administrated interviews for evaluating of the students' K.A.P impact on mouth and dental health care because we believed that this method can produce more valid results.

We believe that measurement of K.A.P. of the dentistry students can be looked upon as a method for assessment of the education quality, preferably through experiences in academic settings. Further studies are needed to confirm the validity of our method as a tool for education quality assessment.

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