

Evaluation of the New Educational Curriculum of Dentistry Ratified by the Ministry of Health, Treatment and Medical Education in 2014

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Abstract

Introduction: *It is necessary to carry out studies, prepare programs and re-think in order to render an effective clinical training. Changes in educational curricula should accommodate changes in oral health, dental community needs and changes, advances and technologies in the dental field. The present study was undertaken to evaluate the quality of the new educational curriculum of dentistry ratified by the Ministry of Health, Treatment and Medical Education. This evaluation was carried out by the professors in Faculty of Dentistry, Tabriz University of Medical Sciences.*

Materials and methods: *In this descriptive analytical study, 35 professors in Tabriz Faculty of Dentistry expressed their opinions about the new educational curriculum of dentistry by completing a questionnaire. The validity and reliability of the questionnaire was confirmed by the professors in Tabriz University of Medical Sciences and its validity was confirmed by a Cronbach's alpha.*

Results: *Thirty-five professors in Tabriz Faculty of Dentistry participated in the study, with a female rate of 45.7%. The mean job experience of the professors was 9.2 ± 7.4 years. Based on the results, the educational curriculum was favorable in relation to aims, content and active teaching techniques; 31.7% of the professors believed that the new educational curriculum was unfavorable in relation to learning activities. In addition, 17.1% of the professors believed the time allocation of the new curriculum was unfavorable.*

Conclusion: *Based on the opinions of the professors in Tabriz Faculty of Dentistry, the new educational curriculum of dentistry has proper quality in general. Revision of the learning activities and the time allocation can give rise to improvements in the quality of the new educational curriculum.*

Key words: Dentistry, Educational curriculum, Evaluation.

Introduction

Dental schools should continuously evaluate their educational curricula and make any revisions if necessary to make sure that they can accumulate the changes in the orodental requirements of the community and are able to conform to the advances and changes in the science and technology in the dental field. In fact the principal aim of the evaluation of the efficacy of a new educational curriculum is to make sure that this curriculum is successful in achieving its aims [1].

Although the majority of educators in the dental profession believe that this branch of science is undergoing changes and the educational curricula should accommodate these changes, they usually resist changes, which is considered one of the barriers to revisions in the educational curricula of dentistry [2–6]. In fact they should be reassured that the new curriculum will be successful in training skilled dentists and its output will be individuals who will be able to face the various challenges in the dental profession and to diagnose oral and dental diseases by observing the ethical principles [7].

This important task will be achieved when changes in the curricula are associated with definite and programmed programs to evaluate the results of application of curricula, providing the opportunity for problems to be manifested so that attempts can be directed toward solving them. However, it should be pointed out that the techniques selected to evaluate curricula should take into account the relationship between changes and the principal aims of the curricula [8].

Different qualitative and quantitative techniques are available for the evaluation of educational curricula, including educational evaluation, evaluation of the performance of graduates in final and board examinations and evaluation of patients' satisfaction with the students' performance in the educational center [8–12].

Evaluation of the efficacy of a curriculum cannot be carried out with only one technique because qualitative and quantitative techniques alone are not able to provide all the data necessary [1].

Materials and Methods

All the academic staff members of Tabriz Faculty of Dentistry, who had studied the new educational curriculum of dentistry, were included in the present descriptive analytical study. The professors who did not have at least 3 lesson plans based on the new curriculum assigned to the higher education centers in 2014 and those who did not have 3 lesson plans based on the old educational curriculum of the Ministry of Health were excluded from the study.

A questionnaire was used for the evaluation, whose reliability and validity was confirmed by the professors of Tabriz Faculty of Dentistry. The validity of the questionnaire was confirmed by Cronbach's alpha.

The questionnaire consisted of 40 questions that evaluated the following:

1. The aims of the educational curriculum
2. The combined content in the curriculum
3. Learning activities of the curriculum
4. Active teaching techniques in the curriculum
5. The time allocation in the curriculum
6. The materials and equipment in the curriculum
7. Learning groups in the curriculum
8. Evaluation of the curriculum

The cases indicating the most favorable situation received score of 5 and cases indicating the most unfavorable situation received a score of 1.

After determining the frequencies of the responses, the total score of each question was estimated using the following formula:

$$\text{Question Score} = \frac{\text{Frequency} \times \text{Question Size}}{\text{Response rate}}$$

Therefore, by having each question's score it was possible to categorize the scores in three groups of favorable, relatively favorable and unfavorable as follows: a score of 1–2.33 was deemed unfavorable; a score of 2.33–3.66 was deemed relatively favorable and a score of 3.66–5 was deemed favorable.

Results

Thirty-five professors in Tabriz Faculty of Dentistry participated in the present study, with a female rate of 45.7%. The mean job experience of the professors was 9.2±7.4 years.

Evaluation of the aims of new educational curriculum showed frequencies of 68.6%, 8.6% and 0% for relatively favorable, favorable and unfavorable cases, respectively.

Table 1. Evaluation of the aims of the new educational curriculum

Value	Frequency	Percentage
Relatively favorable	24	68.6
Favorable	3	8.6
No response	8	22.9
Total	35	100
χ value=16.3		

Evaluation of the content composition of the new educational curriculum showed frequencies of 20% and 65.7% for favorable and relatively favorable cases, respectively, based on the professors' opinions. None of the professors believed that the new educational curriculum was unfavorable in its content.

Table 2. Evaluation of the content of the new educational curriculum

Value	Frequency	Percentage
Relatively favorable	7	20
Favorable	23	65.7
No response	5	14.3
Total	35	100
χ value=8.5		

Evaluation of the new curriculum in relation to learning activities showed frequencies of 20%, 28.6% and 37.1% for favorable, relatively favorable and unfavorable cases, respectively, based on the professors' opinions.

Table 3. Evaluation of learning activities in the new educational curriculum

Value	Frequency	Percentage
Unfavorable	13	37.1
Relatively favorable	10	28.6
Favorable	7	20
No response	5	14.3
Total	35	100
χ value=1.8		

Evaluation of active teaching techniques in the new curriculum showed frequencies of 65.7%, 31.4% and 2.9% for favorable, relatively favorable and unfavorable cases, respectively, based on the professors' opinions.

Table 4. Evaluation of active teaching techniques in the new educational curriculum

Value	Frequency	Percentage
Unfavorable	1	2.9
Relatively favorable	11	31.4
Favorable	23	65.7
Total	35	100
χ value=20.8		

Evaluation of time allocation in the new curriculum showed frequencies of 45.7%, 37.1% and 17.1% for favorable, relatively favorable and unfavorable cases, respectively, based on the professors' opinions.

Table 5. Evaluation of time allocation in the new educational curriculum

Value	Frequency	Percentage
Unfavorable	6	17.1
Relatively favorable	13	37.1
Favorable	16	45.7
Total	35	100
χ value=4.5	P-value=0.105	

Discussion

Evaluation of education in different sciences, especially in the medical science, is a very sensitive issue. To achieve the aims of an effective clinical education it is necessary to continuously evaluate the educational statuses and programs and determine their strong and weak points. One of the best and most important methods for the evaluation of the quality of clinical education is to evaluate the opinions of learners. Manague et al [13] assessed the clinical evaluation of students and concluded that clinical evaluation of the clinical statuses of students is one of the most important components of their educational programs. It is time to assess techniques used to evaluate the clinical abilities of dental students and revise them if necessary. In the present study, the aims of the educational curriculum and the composition of its content were favorable based on the professors' opinions; however, some professors were not satisfied with the learning activities and time allocated for studying in the curriculum. The results of the present study are consistent in this context with those of a study by Eslamipour et al [14], who evaluated the skills of dental students in the community dentistry educational programs. They reported that the community dentistry lessons were successful in making the dental students capable, and to optimize those results they suggested that more time and facilities be allocated to areas of need determination and programming. In addition, they believed further evaluations were necessary to expand the students' activities. In a similar study by Bernabé et al [15], a group of researchers evaluated their students' capabilities in relation to the general health and providing services for the community in different fields based on what was taught according to the dental educational curriculum and compared the results with self-assessments made by the newly graduated students. They concluded that the highest scores were related to health education and relevant activities in order to promote the community health, confirming the success in preparation and implementation of the educational curriculum in relation to its aims. In addition, a study by Schmidt et al (2006), in which the newly graduated dental students and the curriculum of the medical field were evaluated, showed that these students were weak in relation to the management of health for a specific group or groups of the community, participation in programs and epidemiological studies in the community.

Conclusion

Based on the opinions of professors in Tabriz Faculty of Dentistry, the new educational curriculum of dentistry exhibits favorable quality and can meet the educational needs of dental students in relation to its aims, educational content and active teaching techniques. Revision of learning activities and time allocation in the new educational curriculum can promote the quality of this curriculum.

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