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## Original Article

### Perspectives of Dentistry Residents about their Curriculum (2012)

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#### Abstract

**Introduction:** This study was carried out to analyze the viewpoint of dentistry residents about the curriculum presented in the residency program to students of Mashhad School of Dentistry.

**Methods:** In this cross-sectional descriptive study, to evaluate the perspectives of dentistry residents about the curriculum and regulations of residency program, a questionnaire was designed whose validity and reliability were confirmed by the authorities of School of Dentistry and test-retest reliability, respectively. The questionnaires were distributed among 100 residents and 80 of them completed the questionnaires. The data were analyzed by SPSS software (version 11.5).

**Results:** A total of 43% of residents were informed of the curriculum (e.g. academic leave, transfer, removal of semester, etc.). As for the ability to write research proposal, 42.7% of residents were reported to have a favorable status, i.e. they were able to write more than 80% of their proposal. From among the residents, 30.4% had specialized English language certificate. Most of them (77%) were satisfied with the professional staff, faculty members, of the faculty. Many students (74.4%) liked to participate in the teaching method courses of the residency program.

**Conclusion:** Residents maintained that the curriculum in such domains as educational and research issues and special capabilities had some weak points. Thus, appropriate strategies are recommended to be applied to revise the curriculum using the residents' views on these programs.

**Keywords:** Viewpoint, Residents, Curriculum, Perspectives

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## Introduction

The use of evaluation methods to improve the quality of university systems regularly and to engage the faculty members was first taken into consideration by the Ministry of Health and Medical Education in 1998 (1). The curriculum of dental residency program is aimed to train the students who have up-to-date knowledge, appropriate attitude and practical skills based on national and international standards and can provide educational services and play an active role in advancing the sciences and developing the boundaries of knowledge and research in their specialty, in addition to being able to provide high quality preventive and treatment services.

Vahidshahi et al. conducted a study in the medical education development center at Mazandaran University of Medical Sciences in 2009 and suggested more attention to be paid to the training courses for residents of different clinical departments during the residency program at medical faculties. They also argued that it is better to consider training courses of methodology for residents at the very beginning of the residency program based on the assessment of existing needs (2).

Students, as the inputs of the university system, have significant characteristics. Students' status at the time of admission to university in addition to their educational behaviors during studying at university must be investigated. Moreover, their acquired capabilities while leaving the university need proper investigation. Students consider updated knowledge of the teachers and educational facilities as the most important factors for promotion of the quality of medical education. The role of assessment as the basis of planning, development and improvement is highly significant in the recognition of strengths, weaknesses, opportunities, and threats.

Dentistry is one of the branches of medical sciences that requires many academic and professional skills. One of the methods for evaluation of the quality of clinical trainings in dentistry is analyzing the viewpoints of the dental students as the main recipients of these trainings. Hence, this study was conducted to evaluate the viewpoint of the dental residents at Mashhad University of Medical Sciences about the curriculum of dental residency program.

## Methods

In this cross-sectional descriptive study, the questionnaire that had been designed to evaluate the professional courses of Mashhad School of Dentistry in 2008 was revised. The validity of the questionnaire was approved

by seven experts. To assess the reliability of the questionnaire through test-retest method, it was distributed randomly among 20 residents to complete. They completed the questionnaire again with an interval of two weeks. The questionnaire was confirmed with a Kappa coefficient of 87% between the two responses. The questionnaire includes demographic information and items related to education and research domains.

The questionnaires were distributed among all residents of faculty (100 residents) and a total of 80 residents completed them. Those who were reluctant to complete the questionnaire and the questionnaires with incomplete information were excluded from the study. The obtained data were fed into SPSS (version 11.5) software and analyzed by descriptive statistics (tables and graphs). Based on final results of internal evaluation in faculty, we choose status (good, relatively good and fair) for each domain. After scoring the items (with 0-1-2 pattern), the mean scores of each domain were calculated for different departments.  $P \leq 0.05$  was considered significant.

## Results

A total of 80 dental residents participated in this study, comprising about 80% of the residents of School of Dentistry.

### Demographic information

Of the participants, 4 did not mention their gender and from the remaining 76 participants, 44 (57.9%) and 32 (42.1%) were female and male, respectively. As for age, 4 of them did not report their age, 73 (96.1%) were aged 25-30, 2 (2.6%) were aged 30-36 and 1 (1.3%) was aged >35 years. Moreover, in terms of nativity, 12 of them were unknown, 26 (38.2%) were native and 42 (61.8%) were nonnative.

### Education domain of residents

In this study, 43% of residents were reported to have a good knowledge about educational regulations. As for presentation of lesson plan for theoretical courses, 46.8% were satisfied, but the presented lesson plans were found to have included objectives, content, methodology, assessment and resources in the opinion of only 25% of students. Also, 30.8% of them evaluated the lesson plans of practical courses as favorable.

Only 16.7% of residents evaluated the presentation of basic sciences courses favorable. With regard to the congruence of implementation of clinical curriculum with its content, 40.5% of residents were reported to have a

good status (yes), 39.2% relatively good status (partially), and 20.3% poor status (no).

Further, 24.4% of residents (N=20) reported a good status (>80%), 42.3% relatively good status (60-80%) and 33.3% poor status (<60%) in terms of the use of different teaching methods (lecture, question and answer, group discussion, etc.) for theoretical courses. In the case of presentation of hospital courses, 42.3% of residents taking these courses reported a good status and only 22.8% of them were satisfied with the schedule of basic sciences courses.

As for the regulations of the program (e.g. wage, duties, etc.), only 16.9% of the residents were informed at the beginning of the program. In the case of specialized units

and independent facilities, 48.7% of residents reported a good status (yes), 29.5% a relatively good status (partially), and 21.8% poor status (no).

With regard to the presentation of log book at the beginning of the semester, 33.8% of residents mentioned a good status (yes, completely and clearly), 41.6% relatively good status (yes, not completely), and 24.7% poor status (no, not presented).

Figure 1 presents the mean scores of education domain for different departments. As indicated, the maximum mean score is reported for the department of orthodontics, which is indicative of higher satisfaction and/or knowledge (according to the type of question) of residents of department of orthodontics than other departments.

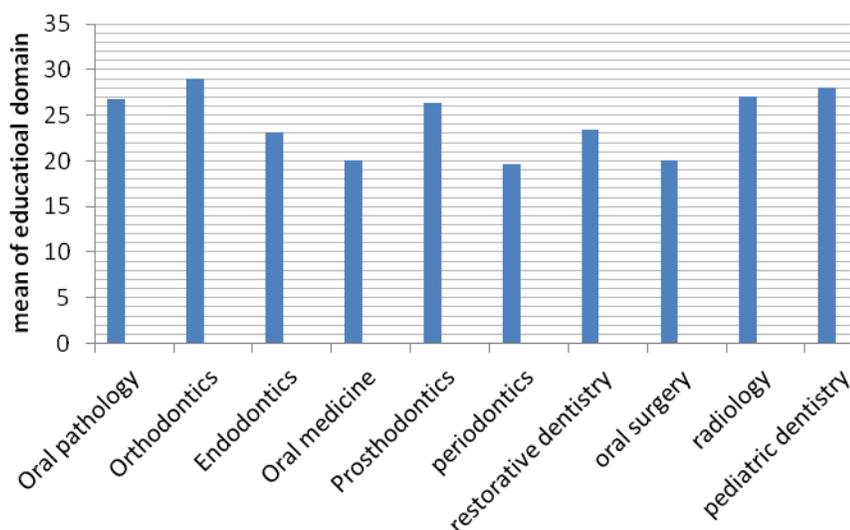


Figure 1. Mean score of educational domain for different educational groups

### Research domain of residents

Regarding the ability to write the research proposal, 42.7% of residents were found to have a good status (>80%), 41.3% relatively good status (50-80%) and 16% poor status (<50%). Also, 60% of the residents participated in research projects (other than thesis) and 70% attended specialized congresses of their specialty.

Further, 21.8% of the residents were research project executor and 58.8% cooperated in research projects. Figure 2 shows the mean scores of research domain for different departments. As shown, the maximum mean score is reported for the department of endodontics, which indicates higher research activities of the students of department of endodontics than other departments.

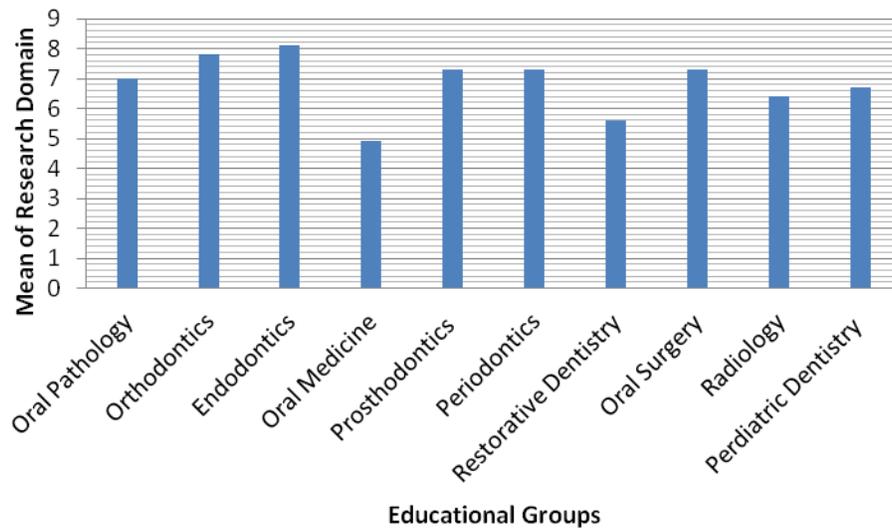


Figure 2. Mean score of research domain for different educational groups

## Discussion

The purpose of establishing an assessment and accreditation system in educational programs, which includes major dimensions of curriculum, standards of the program and institution, management, resources, facilities and research, is making judgment about the gap between the existing and standard condition. Assessment is an inseparable part of any organization or program, and the feedbacks taken from assessment significantly affect the future decisions (3, 4).

The analysis of education domain of the residents showed that most of them (57%) were unaware of the educational rules and regulations. In a study conducted by Hassanzadeh Taheri et al. in 2006 on the academic performance of different faculties of Birjand University of Medical Sciences regarding the observance of these regulations, it was found that 84.5% confirmed the presence of log book in this regard and 62.1% reported changing the shift program against the rules (5).

According to the results of these studies, such issues as control of the final approval of addition and deletion and confirmation of the education office of the faculties are required to be taken more seriously into account so that students and residents get the required information. With regard to the lesson plans presented for theoretical courses (objectives, content, methodology, assessment and resources), only 28.9% had a poor status. The study carried out by Rafeey et al. in 2009 indicated that about 74.8% of residents considered having a lesson plan and stating the objectives very important (6). Therefore, given

the low satisfaction of residents with the lesson plan of practical courses and educational significance of this issue, new and appropriate strategies are needed to be adopted in order to make good changes.

As for presentation of basic sciences courses, only 16.7% of residents were satisfied. The study performed by Alipour-Heidari et al. showed a total mean of 2.2 for application of basic sciences courses and 2.43 for theoretical-practical courses from the perspectives of the dental students (7). However, in the study of Saleem Safi et al. in 2002 the overall presentation of basic sciences courses was found to be very good, and in general, the educational quality of basic sciences was evaluated to be good and very good (8). Since association of theoretical knowledge and academic skills is important for the dentists, the contents of basic sciences courses are suggested to be revised and made more applicable based on the current and future needs of the dentists and community. Further studies are also required to investigate the use of novel teaching methods of dentistry for teaching basic sciences courses.

With regard to the use of different teaching methods (lecture, question and answer, group discussion, etc.) for theoretical courses, it can be argued that most of the residents were satisfied but the majority of them were dissatisfied with the presentation manner of hospital courses. The results of a study performed by Safavi et al. in 2011 evaluating the quality of teaching methods using the viewpoints of the residents of department of anesthesiology showed that the majority of residents (85.5%) were satisfied with the quality of teaching methods (9). Thus, it is necessary to provide the teachers

with required trainings and to make the learners familiar with these methods in order to enhance the efficacy of teaching and learning (10).

As for the domain of research activities, most of the residents enjoyed a favorable and moderately favorable status in terms of writing the research proposal, participation in research projects other than the thesis, and attending specialized congresses; however, only 21.8% of them were the executor of research project. The findings of the study by Kanna et al. in 2006 demonstrated that the residents' attendance in academic activities was significantly increased. The results of this study also showed that the presence of research courses in the residency curriculum has many advantages such as providing the required knowledge and skills for dealing with research activities and implementing evidence-based medical principles as the basis for efficient medical practices and promotion of the skills needed for the critical analysis and intervention in the published data (11).

## Conclusion

The curriculum of Dental School has many drawbacks in the domains of education, research, and special capabilities. Therefore, it is necessary to apply appropriate strategies to revise the curriculum using the perspectives of the dental residents.

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