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Original Article

Evaluation of educational programs of pediatrics, orthodontics and restorative departments of babol dental school from the perspective of the students based on the CIPP model

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Abstract

Introduction: Evaluation is a critical issue to achieve the goals of academic education. The aim of this study was to evaluate the achievement level of educational objectives in Babol dental school using the CIPP (content, input, process, and product) model based on the point of view of students.

Materials &Methods: This cross-sectional study was performed using a researcher made questionnaire based on CIPP model for three educational groups of pediatrics, orthodontics and restorative dentistry among dental students accepted in 2008 and 2009. Total scores were calculated for each field and categorized as undesirable, relatively desirable and desirable with scores below 50, 51-70 and 71-100, respectively. Statistical analysis was performed using ANONA, T-test and Tukey HSD tests and $p<0.05$ was considered significant.

Results: The mean scores were desirable in all groups. Mean scores allocated to the content, input, process and product areas were not significantly different in the pediatrics, orthodontics and restorative dentistry groups.

Conclusion: Based on the student's point of view, the pediatrics, orthodontics and restorative dentistry departments of Babol dental school were successful in achieving educational goals.

Keywords: Educational models, Dental student, Education, Evaluation

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ارزشیابی برنامه های آموزشی بخشهای کودکان، ارتودنسی و ترمیمی دانشکده دندانپزشکی بابل از دیدگاه دانشجویان بر اساس الگوی CIPP

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چکیده

مقدمه: ارزشیابی امری حیاتی برای دستیابی به هدف های آموزش عالی می باشد. این مطالعه جهت بررسی میزان دستیابی به اهداف آموزشی در دانشکده دندانپزشکی بابل با کمک الگوی [CIPP زمینه (محتوا)، درون داد، فرآیند، برون داد] از دیدگاه دانشجویان انجام شد.

مواد و روش ها: این مطالعه از نوع مقطعی با استفاده از پرسشنامه محقق ساخته بر اساس الگوی CIPP در سه گروه اطفال، ارتودنسی و ترمیمی در میان دانشجویان ورودی ۸۷ و ۸۸ صورت گرفت. نمرات کل در هر حیطه محاسبه شده و نمرات کمتر از ۵۰، ۵۱-۷۰ و ۷۱ -۱۰۰ به ترتیب نامطلوب، نسبتاً مطلوب و مطلوب در نظر گرفته شد. آنالیز آماری با استفاده از آزمون های ANONA T-test و Tukey HSD انجام شد و $p< 0.05$ معنی دار در نظرگرفته شد.

یافته ها: میانگین نمرات در همه ی گروه ها مطلوب بود. میانگین نمرات اختصاص داده شده به حیطه های زمینه، درون داد، فرآیند و برون داد در بین بخش های اطفال، ارتودنسی و ترمیمی معنی دار نبود.

نتیجه گیری: بر اساس نظر دانشجویان، گروههای اطفال، ارتودنسی و ترمیمی دانشکده دندانپزشکی بابل در دستیابی به اهداف آموزشی موفق بودند.

واژگان کلیدی: مدلهای آموزشی، دانشجوی دندانپزشکی، آموزش، ارزشیابی

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Introduction

Looking at the developments in academic education indicates that the current educational system has been faced with many challenges over the last two decades, increasing in number of accepted dental students in universities, reduction of the quality of the university education, inapplicability of the university education in the workplace and the increased numbers of universities regardless of the existing capacity and economic power of the society for accepting graduates can be mentioned.[1] Considering the improvement in the quality of academic education is essential and reporting the quality indicators of this academic education system requires a careful evaluation of the system.[1] Studies show that measuring the quantitative and qualitative evaluation of medical education environments in medical schools, identifying strength and weakness points in educational programs and accessing the students', faculties' and staffs' point of view is important; on the other hand it is a significant indicator in predicting educational outcomes.[2] One of the assessment tools of teaching methods and evaluating a clinical educational system is using the students' point of view.[3]

The CIPP model was used to design an evaluation template and this template was presented by Stufflebeam et al. aimed to help managers and decision makers consider that "the main objective of the evaluation is to improve not prove ".

The CIPP model makes it possible for evaluators to assess the program at any time during the development, design, and even the implementation and completion stages.[4]

The CIPP is formed as the first letters of the following words: Content, Input, Process, and Product. This template is used to help evaluating the key aspects of the program, including:

Content evaluation: The purpose of this evaluation is to provide a rational context to determine educational purposes;

Input evaluation: In this stage, the required information about how to use resources are collected to achieve program goals;

Process evaluation: In this stage, "how to perform the program" is evaluated; this stage attempts to answer questions such as:

Is the program well implemented? What are the obstacles to success? What changes are necessary?

Product evaluation: In this step, it becomes clear what the results are; the results are compared with the goals of the program, and the relationship between expectations and actual results are determined.[5]

Makarem et al. (2012) used the CIPP evaluation model and concluded that, from the students' point of view, the content, input and process areas of the oral health education program were relatively desirable but the product area was undesirable.[6]

Pakdaman et al. (2011) assessed the achievement level of educational goals in periodontics and oral health groups based on the point of view of dental students of Tehran University of Medical Sciences with the CIPP model and the results showed that there was a significant difference in the two areas of content and process between the two groups and subheads in these two areas needed to be revised. [7]

The aim of this study was to evaluate the educational programs and assess the achievement of learning goals in the pediatrics, orthodontics and restorative departments of Babol University using the CIPP model as one of the most important and widely used models for evaluation from the view point of the students.

Materials &Methods

In a cross-sectional study the study population are all accepted dental students in 2008 and 2009 (graduates of 2014 and 2015) of Babol University of Medical Sciences. Pediatrics, orthodontics and restorative dentistry departments were evaluated based on CIPP model. The reason for choosing these three departments was the consistency and close relation of their contents. Data collection tool was a questionnaire designed based on the educational objectives for each department, in accordance with the educational curriculum. The validity of questionnaire was checked by three faculty members of Babol dental school. The reliability of questionnaire was also calculated by test-retest method within 10 days (Cronbach's alpha 0.97) in the randomly selected department.

In the first part of the questionnaire, questions about students' personal characteristics, including gender, age and year of entry were asked. In the next section of the questionnaire for the evaluation of the field, the educational policies and educational environment were examined for pediatrics, orthodontics and restorative dentistry departments of Babol dental school. The number of questions in this parts consisted of four questions. The number of questions in this area contained four questions. Input evaluation of the study was to assess the input elements to the training program that included the following: planning, equipment, budget and human resources. Eight questions were designed for this purpose. In the process evaluation, problems related to student learning, continuous evaluation process of teaching and learning which included five items were examined.

The product evaluation assessed student satisfaction for the outcome of the education and its applicability in pediatrics, orthodontics, and restorative departments. The total number of questions was 117.

Oral explanations were given to the students about the study by the researcher and an anonymous questionnaire would be sent to them at the end of the semester (the 2008 accepted students have received the questionnaires by email). The Yes, Somewhat and No answers were used to determine the content, input and process and product. For the statistical comparison, the yes option had 3 points, the Somewhat 2 points and no received zero point. The product evaluation was ranged five options: very low, low, medium, high and very high, and for the statistical comparison, 1 to 5 points were assigned. Then, for illustrative classification in frequency presentation, very low and low options were mixed in the low group and high and very high were mixed in the High group. Total obtained scores were calculated for each area separately and for having comparable scores in each area, the obtained scores from each area were reduced to 100. In analyzing the results, an average of less than 50 was considered as undesirable, between 51 and 70 was relatively desirable and 71 to 100 was considered as desirable.

Data were analyzed by SPSS version 21 using analysis of variance (ANOVA), Tukey HSD test and T-test. $P < 0.05$ was considered statistically significant.

Results

The population of the study included all the students accepted in 2008 (32 persons) and 2009 (29 persons) that graduated in 2013-2014 over 61 cases. Sampling in this study was a census method. 81.25%

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and 89.65% dental students accepted in 2008 and 2009 responded to the questionnaires; respectively. 69.2 % of all respondents were female.

From the perspective of students, achieving educational objectives were desirable in the area of the content, input and process in the pediatrics, orthodontics and restorative departments. Comparison of three areas of content, input and process was performed using ANOVA test and the difference was not significant in these three areas. table 1 showed desirability level on content, input and process areas in all studied groups.

From the perspective of the 2009-accepted students, only in the input area, there was a significant difference, and consequently achieving the educational objectives in the pediatric group had no significant difference with the restorative group, but was significantly higher than the orthodontic group (P=0.045).

The viewpoints of the accepted students in 2008, within the content of the process areas, were not significantly different, but a significant difference was reported within the Input area of the orthodontic (P=0.023) and restorative dentistry (P=0.021) groups.

Table1: Desirability level on content, input and process areas in three educational groups (%)

Content area	pediatrics	orthodontics	restorative dentistry
Are the materials presented in the relevant group related to the material presented in other groups?	85.2	83.9	86.5
Are the materials presented in the relevant group adjusted to your needs as a dentist?	88.4	69.2	76.2
Is the time (term) of presenting theoretical unit appropriate?	86.5	79.4	81.4
Is enough time allocated to the respective unit ?	81.4	77.5	64.7
Input area			
Is course content adjusted to the needs of students?	84.6	74.3	85.8
Are sufficient resources (materials) and equipments provided to students in practical educational ?	82	78.2	81.4
Is sufficient educational resources for the study of the relevant group (theoretical and practical) provided to students?	80.1	85.8	76.9
Is the number of patients sufficient for practical educational ?	83.9	78.8	73.7
Is the number of teachers consistent and adequate for students?	78.2	76.9	92.9
Is the professors' supervision sufficient during students' performance?	91	88.4	90.3
Do the teachers have enough educational skills?	89.1	85.8	85.2
Do the nursing staff have enough cooperation with students?	85.2	92.3	90.3
Process area			
Is there any problem with teaching?	23.7	25	26.9
Is there necessary correspondence between education theory and its application in practical work?	69.8	66.6	62.1
Is the amount of materials adjusted to the educational needs?	83.3	81.4	80.7
Is the educational material presented in the proper time?	82.6	85.8	87.8

A comparison among the content, input and process areas is reported in table 2 for all students divided by their university entry year. The most desirable points for the content area was reported in pediatrics ,for the Input area was in the restorative group, for the process area was in orthodontics, and for the product area was in the restorative group, but not significant statistically. Among the evaluated indicators, the highest score was belonged to consistency of the number of professors with the students in the restorative department, which is a subset of input with the average score of 92.9%. The least score was also belonged to the ability to diagnose and understand the principles of trauma treatment in pediatrics department, which is the subset of product with an average score of 58.9%. Area of content was considered desirable about all the questions from the students' viewpoint except consistency of the presented subjects with the needs of students in the Department of orthodontics and the time dedicated to the restorative was relatively desirable (table1). In addition, all the indicators within the area of Input in all groups were reported desirable. The area of Process was reported

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desirable for all indicators except consistency between theoretical education and its application in practical work which was reported relatively desirable in all three groups (table1). In the area of Product, four indicators; diagnosis and treatment of trauma, tooth hypoplasia, ankylosed teeth, and space management were relatively desirable and other indicators were reported desirable in the pediatrics group (table3). From the perspective of the students, the area of product in orthodontics group was desirable in all evaluated indicators. The frequency of answers to these questions and the desirability level of the CIPP product area belonging to the orthodontic group are reported in table 4. In the area of Product in the restorative group, among 17 assessed indicators only one indicator; knowing the bleaching principle, was relatively desirable and other indicators (94.1 percent) were reported desirable. The frequency of answers to these questions and the desirability level of the CIPP product area belonging to the restorative group are reported in table 5.

Table 2. Mean and standard deviation, the percentage of desirability of the content, Input and process areas divided of by their acceptance year within the pediatrics, orthodontics and restorative groups

Acceptance year	Areas/Indicators	Content		Input		Process	
		Mean±SD	Desirability	Mean±SD	Desirability	Mean±SD	Desirability
2008	Pediatrics	10.23±2.141	82.9	20.58±4.606	82.3	11.85±2.185	78.6
	Orthodontics	9.73±2.146	76.8	21.96±4.359	82.5	11.65±2.416	76.6
	Restorative	9.96±2.144	74.6	22.35±4.261	83.2	11.35±2.348	76.9
	P-value	0.703		0.320		0.736	
2009	Pediatrics	10.42±2.266	87.7	22.81±5.238	86.1	11.5±2.195	76.9
	Orthodontics	9.85±1.488	78.1	19.23±4.013	82.6	11.73±2.426	77.8
	Restorative	10.04±1.612	79.8	19.38±4.674	85.8	11.08±2.667	77.2
	P-value	0.511		0.010		0.620	
Total	Pediatrics	10.33±2.185	85/3	21.69±5.012	84/2	11.67±2.176	74
	Orthodontics	9.79±1.829	77/5	20.6±4.371	82/5	11.69±2.397	74.5
	Restorative	10±1.879	77/2	20.87±4.674	84/5	11.21±2.492	73.5
	P-Value	0.376		0.465		0.502	

Table 3. Distribution of answers to questions about the ability of achievement to educational goals in the pediatrics group in product area

Questions	Low	Average	High	Desirability (%)
1. Health education to children and their parents	3(5.8)	9(17.3)	40(75.9)	90.3
2. Behavior management of children in the clinic	8(14.4)	28(53.8)	16(30.8)	71.7
3. Detailed examination of the mouth and teeth of children	6(11.5)	13(25.0)	33(63.4)	83.9
4. Performance and interpretation of intraoral radiography in children	6(11.5)	23(44.2)	23(44.2)	77.5
5. To perform infiltration and block injection techniques in children	3(5.8)	11(21.2)	38(73.1)	89.1
6. Carry out prevention techniques (prophylaxis, fluoride, fissure sealant, Preventive Resin Restoration, Stainless Steel Crown)	5(9.6)	9(17.3)	38(73.1)	87.8
7. Detection and treatment of primary and permanent tooth decay in children	3(5.8)	18(34.6)	31(59.7)	84.6
8. Detection of interproximal decay	4(7.7)	18(34.6)	30(57.7)	83.3
9. Treatment of pulp disease in primary and permanent teeth of children	4(7.7)	19(36.5)	29(54.8)	82.6
10. To recognize and understand the principles of treatment of trauma in children	22(42.3)	20(38.5)	10(19.2)	58.9
11. Primary teeth extraction	4(7.7)	12(23.1)	36(69.2)	87.1
12. To diagnose a variety of abscesses and cellulitis in children	9(17.3)	25(48.1)	18(33.6)	72.4
13. To diagnose types of hypoplasia and discolored teeth	16(30.7)	20(38.5)	16(30.8)	66.6
14. To diagnose ankylosed teeth	19(36.5)	17(32.7)	16(30.8)	64.7
15. Space maintenance in cases of early loss of primary teeth	17(32.7)	21(40.4)	14(26.9)	64.7

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Table 4. Distribution of answers to questions on the product area in the orthodontics group

Questions	Low	Average	High	Desirability (%)
1. Knowing the principles of impression of maxilla and mandible and ability to do it	1(1.9)	13(25.0)	38(73.0)	90.3
2. The ability to trim the cast of the patient according to standard methods	2(3.8)	24(46.2)	26(50.0)	82
3. Knowledge of and ability to make orthodontic appliance components	4(7.7)	21(40.4)	27(51.9)	71.3
4. The ability to identify patients with Class I malocclusion and monitoring space	1(1.9)	26(50.0)	25(48.1)	82
5. The ability to diagnose patients with Class II malocclusion and treat by functional or headgear devices	4(7.7)	20(38.5)	28(53.8)	82
6. The ability to diagnose and treat patients with slight class III malocclusion	7(13.5)	18(34.6)	27(51.9)	79.4
7. The ability to identify Open bite patients at the growth age and possible treatment using dental growth and extrusion	8(15.4)	20(38.5)	24(46.2)	77
8. The ability to identify Deep bite patients and treatment by orthodontic appliance in adolescence	6(11.5)	20(38.5)	26(50.0)	79.4
9. The ability to identify patients with anterior dental cross bites and its treatment with removable appliances	1(1.9)	24(46.2)	27(51.9)	83.3
10. The ability to identify patients with posterior dental cross bite and its treatment with removable appliances and W_arch	4(7.7)	20(38.5)	28(53.8)	82
11. Ability to interpret radiographic images and lateral cephalometric	8(15.4)	20(38.5)	24(46.2)	77
12.The ability to interpret jaw-teeth space on dental casts	8(15.4)	21(40.4)	23(44.2)	76.2
13. The ability to estimate the eruption time of permanent teeth	9(17.3)	24(46.2)	19(36.5)	73
14. The ability to regulate Orthodontic appliance delivered to the patient in the first and subsequent visits	10(19.2)	24(46.2)	18(34.6)	71.8
15. The ability to space management	8(15.4)	27(51.9)	17(32.6)	72.4

Table 5. Distribution of answers to questions about knowledge of students on the product area in restorative group

Questions	Low	Average	High	Desirability (%)
1. The mechanisms of decay and its diagnosis	3(5.8)	12(23.1)	37(71.2)	88.4
2. The properties of the amalgam and how to use it	3(5.8)	14(26.9)	35(67.4)	87.1
3. The properties of composites and how to use it	4(7.7)	13(25.0)	35(67.3)	86.5
4. The instruments and how to use it	2(3.8)	11(21.2)	39(75.0)	90.3
5. The principles of matrix bar and wedge and how to perform it	1(1.9)	11(21.2)	40(76.9)	91.6
6. The principles of class I amalgam restoration and the ability to do it	4(7.7)	8(15.4)	40(76.9)	89.7
7. The principles of class II amalgam restoration and the ability to do it	4(7.7)	10(19.2)	38(73.1)	88.4
8. The principles of class V amalgam restoration and the ability to do it	5(9.6)	13(25.0)	34(65.4)	85.2
9. The complex principles of amalgam restorations and the ability to do it	10(19.2)	17(32.7)	25(48.1)	76.2
10. The principles of class III restorative with composite and the ability to do it	3(5.8)	8(15.4)	41(78.8)	91
11. The principles of class IV restorative with composite and the ability to do it	3(5.8)	10(19.2)	39(75.0)	89.7
12. The principles of class V restorative with composite and the ability to do it	3(5.8)	11(21.2)	38(73.1)	89.1
13. The basics of tooth-colored posterior restorations and the ability to do it	4(7.7)	16(30.8)	32(61.5)	84.6
14. The basics of endodontic tooth restoration and the ability to do it	4(7.7)	20(38.5)	28(53.9)	82
15. The principles of finishing and how to do it	3(5.7)	17(32.7)	32(61.6)	85.2
16. The principles of polishing and how to do it	2(3.8)	15(28.8)	35(67.3)	87.8
17. The basics of tooth bleaching	22(42.3)	12(23.1)	18(34.7)	64.1

Discussion

The basic question that dental education system planners are always facing is: “Does this educational dentistry system achieve the ideal objectives?”, and “Are the students able to provide optimal theoretical and

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practical skills to their patients after completing this course?" In this study, four areas of content, input, process and product in the pediatrics, orthodontics and restorative Dentistry Departments of Babol University were studied based on the CIPP model. The results showed that, in the students' viewpoint, all four areas were desirable to achieve educational objectives in the pediatrics, orthodontics and restorative departments. From the students' view point, the content area was desirable in all three studied groups, only the indicator of "time devoted to the course" in the restorative group was reported relatively desirable, showing that greater attention should be paid in the training programs.

The findings of SanatKhaniet al. in the Mashhad Dental School (2009) showed that the total time specified to each clinical section in general dentistry was considered desirable from the viewpoint of the majority of students; these results are consistent with the results of this study. [8] In the study of Borhan Mojabiet al. in Qazvin (2002), students reported that the duration of clinical training was sufficient, except orthodontics which was reported insufficient.[9] However, the students of Babol University are content with the duration of the clinical training in the orthodontic department.

Analysis of the results in the Input area showed that from students' viewpoint, the content and educational purposes, educational facilities, and the number of clients (patients), the number of teachers, teachers' skills and supervision on students' performance and cooperation of nurses were desirable.

The findings of Sanatkhani's study indicated that students reported the lowest average score for the facilities of the pediatrics department so their results are incompatible with the current study.[8]In a study in Shiraz by Amanat et al., the highest satisfaction in students dealing with faculty and staff was in the department of pediatrics, that is consistent with the present study.[10] The study of BorhanMojabi showed that planning was not proper in terms of the number of professors and students in many departments, and only 31.7% of students reported the good consistency in the number of teachers, which is incompatible with our study.[9]The findings of Sanatkhani's study suggested that the majority of students evaluated the supervision of professors on students' performance in a good level for practical activities and found appropriate number of faculty members in the departments, that is consistent with this study.[8]

In the present study, the process area for the indicator of consistency between theoretical training and its application in clinical practices, in each department was assessed as relatively desirable. It may be due to delivering a high volume of content on the theory-based training curriculum to enhance students' understanding while this theoretical training of students may not match the practical needs. This lack of consistency may be due to a high volume of content offered on the theory based on the educational curriculum to enhance students' knowledge, while this theoretical training may not be so applicable. On the other hand, differences in treatment protocols used by professors in different departments as well as the lack of consistency in some parts of the treatments in the practical part with the protocols provided in the references can be the reasons of the acquired viewpoint of the students. Despite these potential shortcomings, the need for further investigation to find the possible solutions and fix them is required. In the present study, from the perspective of the students in the product area, the highest capability was related to informing the children and their parents of the health education, learning the block and infiltration injection techniques on children and the ability to perform prevention procedures, while the least capability was reported on the ability to diagnose and understand the principles of treatment of trauma in children, the ability to recognize the ankylosed teeth, the ability to control space for an early loss of a primary tooth and the ability to diagnose all types of hypoplasia and tooth discoloration. Since patients who have been exposed to trauma and ankylosed teeth or hypoplastic patients are mainly treated at specialized units, so the students of the general courses are less encountered with the training issues in practice, which leads to their relatively lower strength in these cases. It seems, according to the case of the patients and the short period of practical training for students in general courses, it is better to resolve this problem by holding practical educational training seminars in the form of case reports, in order to meet the educational deficit.

In Nematolahi's study in Mashhad University in 2012, the highest achievement in the pediatrics department was reported on the preventive educations and injection, and the least success rate was in terms of space retention and control of children, which is indirectly consistent with the results of the current study.[11] Mentioned findings are indirectly consistent with the study of Rodd et al. They evaluated the

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experience and confidence level of the students of three dentistry schools of Liverpool, Manchester and Sheffield in the field of pediatric dentistry and they concluded that the clinical experience of students was sufficient for their future needs. So, 100% of them had experienced sealant and repair, and 87-98% of them had experienced a tooth extraction.[12] In the study of Horri et al. in 2013 in the Dentistry School of Kerman, students reported their satisfaction with an average of approximately 75% on the training courses, offered in practical pediatric courses and appropriate education in clinic. They rate their ability in tooth extraction, preventing cavities, and primary tooth restorations as 87.1, 83.9, and 80.7 percent respectively; these results are compatible with the results of this study. [13]

In the present study, from the students' viewpoint in the product area, achieving the educational objectives was desirable in the orthodontics department.

In the study of Fattahi at the Dentistry School of Shiraz in 2008, students believed that they were capable of expressing the characteristics of normal occlusion and malocclusion, as well as their ability in molding the chin and providing appropriate arch impressions, these results are the same as those in our study.[14]

In the study of BorhanMojabi from the students' viewpoint, no appropriate training for the orthodontic treatment planning on patients was performed. They also complained about the short duration of the clinical training as part of their orthodontic course, that is incompatible with our study.[9] In this study, in the Restorative department, the highest capability was reported in knowing the principles of matrix bar and wedging techniques, class III restoration with composite, class IV restoration and the least capability was reported in knowing the principles of bleaching.

The reason of the relatively desirable ability of students in the indicator of "knowing the principles of bleaching" is due to the limition of this indicator to the theoretical teaching in the educational curriculum and students in clinical education do not even see the demonstration. The study of Khamverdi in Hamedanon (2014) on graduated students indicated that achieving educational objectives in the theoretical training was desirable for the Restorative department and these results were consistent with the results of this study.[15] Samyari also noted that the majority of students in tehran and shahed universities needed more theoretical restorative information, and it seems that the students' capability in the practical activities was desirable in both universities that is consistent with the results of this study .[16] The results of Eslamipour's study showed that practical training methods were not enough in the restorative department. The evaluation criteria were also unknown in this department and professors' behavior with students was reported inappropriate in the presence of patients; however, these results are incompatible with the results of the current study.[17] The reason for the differences between the achievement of educational goals in this study and the results of other studies can be the research methodology (the CIPP model versus other evaluation models) and different facilities and equipment and other conditions in different universities, so the result of the studies was reported without any comparison. The main limitation of this study was the poor cooperation of some of the students in completing questionnaires and sending them. They stated the reason for their reluctance to complete the questionnaire as the failure to use the results of research and research projects in the planning from their viewpoints.

It is recommended to evaluate the future graduates with the new educational curriculum using the CIPP model due to the changes in dentistry curriculum since 2011, and to compare the future results with the results of the present study in order to obtain a rigorous and better basis in planning for the authorities. The sample size compared to all dental graduates in the country was non-random and small, so the generalizability should be interpreted with more caution.

Conclusion

Based on the point of view of 2008 and 2009-accepted students of Babol dental school, educational objectives in the pediatrics, orthodontics and Restorative dentistry departments were desirable.

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Authors' Contributions

The study was designed by Mitra Tabari and Iman Jahanian.The study data were collected by Ziba Nourali. Analysis and interpretation of data, drafting of the manuscript, and critical revision of the manuscript for important intellectual content were pre-formed by Soraya Khafri and Samane Gharekhani .Study supervision was performed by Mitra Tabari and Iman Jahanian.

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