

### Investigating Students' Opinions about Oral and Maxillofacial Pathology Course in Mashhad School of Dentistry (2009-2010)

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**Background:** oral and maxillofacial pathology is one of the major courses in basic sciences relating dentistry to medicine and is the basis of learning many clinical sciences. Since the periodic evaluation is important in identifying issues and solving them, in this study, students' opinions were used to gather useful information for better planning in this course.

The purpose of this study is to investigate students' opinions about oral and maxillofacial pathology course in Mashhad School of Dentistry.

**Methods:** This is a cross-sectional study conducted in Mashhad School of Dentistry in 2009-2010 academic year. All students attending their third years of study or more, who had taken oral and maxillofacial pathology course and were willing to answer the questions participated the study. The study was done on 250 students, field method was used for data gathering and the data gathering tool was a researcher made questionnaire, and census was used for sampling. After collecting data, they were coded and analyzed by SPSS 13.

**Results:** According to the results of this study, 63.2% of students had complete to relative satisfaction with the theoretical pathology course, and 81.6% had complete to relative satisfaction with the practical pathology course. Students mentioned the diagnosis of oral diseases as the main application of this course.

**Conclusion:** By using students' opinions about Oral and Maxillofacial Pathology course in this study, in addition to improving students' satisfaction by increasing participation and minor modifications in examination methods, we can hope an improvement in teaching quality.

**Keywords:** student of dentistry, oral and maxillofacial pathology

### بررسی دیدگاه دانشجویان دانشکده دندانپزشکی مشهد در مورد واحد درسی آسیب شناسی دهان و فک و صورت در سال تحصیلی ۱۳۸۸-۸۹

**زمینه و هدف:** درشته آسیب شناسی دهان و فک و صورت یکی از دروس مهم علوم پایه می باشد که شاخه ارتباطی پزشکی و دندانپزشکی بوده و مبنای فراگیری بسیاری از مباحث دروس کلینیکی می باشد. با توجه به این که ارزیابی دوره ای شیوه های آموزشی نقش بسزایی در درک نقاط ضعف و قوت هر سیستم آموزشی و اصلاح مشکلات موجود دارد، در این مطالعه، با بررسی نظرات دانشجویان سعی شد تا اطلاعات مناسبی جهت برنامه ریزی های دقیق آموزشی این درس کسب تعیین دیدگاه دانشجویان در مورد آموزش درس آسیب شناسی دهان و فک و صورت در دانشکده دندانپزشکی مشهد.

**روش:** این مطالعه از نوع مقطعی- توصیفی بوده که در دانشکده دندانپزشکی مشهد در سال تحصیلی ۱۳۸۸-۸۹ صورت پذیرفت. معیار ورود به مطالعه، کلیه دانشجویان سالهای سوم به بالا بود که درس آسیب شناسی دهان و فک و صورت را انتخاب کرده بودند و تمایل به پاسخگویی به سؤالات را داشتند. در این مطالعه که بر روی ۲۵۰ دانشجو انجام شد، شیوه گردآوری اطلاعات میدانی و ابزار گرد آوری اطلاعات پرسشنامه محقق ساخته بود و نمونه گیری به صورت روش سرشماری صورت گرفت. پس از تکمیل پرسشنامه ها، داده ها جمع آوری و کدگذاری شده و با استفاده از نسخه ۱۳ نرم افزار آماری SPSS و آمار توصیفی، مورد تجزیه و تحلیل آماری قرار گرفت.

**یافته ها:** براساس نتایج این پژوهش ۶۳/۲٪ از دانشجویان از نحوه ارائه دروس آسیب شناسی نظری و ۸۱/۶٪ از نحوه ارائه دروس آسیب شناسی عملی رضایت کامل تا نسبی دارند و اغلب آنان امتحانات دوره ای Quiz و روش تدریس مشارکت استاد- دانشجو را جهت بهبود کیفیت آموزشی پیشنهاد نمودند. دانشجویان بیشترین کاربرد درس آسیب شناسی دهان را در تشخیص بیماری های دهان عنوان نمودند.

**نتیجه گیری:** با استفاده از نظرات دانشجویان در رابطه با مسائل آموزشی درس آسیب شناسی دهان و فک و صورت در این پژوهش، علاوه بر کسب رضایت حداکثر دانشجویان با افزایش میزان مشارکت دانشجویی در دروس و تغییرات مختصری در نحوه امتحانات، می توان امید به بهبود کیفیت تدریس داشت.

**واژه های کلیدی:** دانشجویان دندانپزشکی، آسیب شناسی دهان و فک و صورت،

### مطالعه نظرات طلاب کلیه اللسانان فی مشهد تجاه درس باتولوجی الفم و الفك و الوجه فی العام الدراسي ۱۳۸۸-۸۹ هـ. ش

**التصميم و الهدف:** يعتبر درس باتولوجی الفم و الفك و الوجه من اهم دروس المقدمات في كلية طب اللسان و يعتبر ذو ارتباط بين كلية الطب و كلية طب اللسان و يعتبر ايضا كقاعده منائيه في الدروس السريرية و نظراً الى أن التقييم المتتالي له دور كبير في تبين نقاط الضعف و القوة في الربطية التعليمية و يعتبر من اهم اسس اصلاح العقبات الموجودة. تهدف هذه الدراره الى متابعه رؤيه الطلاب و تجميع المعلومات الكافيه للجراء برمجته ادو و اسئل. **الأسلوب:** أن هذه الدراره من نوع المقطعي - التوصيفي اجريت في كلية اللسان في جامعه مشهد عام ۱۳۸۸-۸۹ هـ. ش. معيار اختيار الاختصاص كان الطلاب الذين اتوا السنه الثالثه الدراربه و كانوا قد انتخبوا ماده باتولوجی الفم و الفك و الوجه و كان عددهم الرغبه في المشاركه في الدراره. اجريت هذه الدراره على ۲۵۰ طالب و تم تجميع المعلومات عبر استمارات محققه بعد تكميل الاستمارات تم استخدام برنامج SPSS 13 لتحليل المعطيات.

**النتائج:** اشارت هذه الدراره الى أن ۶۳.۲٪ من الطلاب كانت نظرتهم من التدريس النظري لرينا الدرس و ۸۱.۶٪ منهم كانت نظرتهم من التدريس العملي لرينا الدرس كامله الى نسبته. الغالبية اقرحوا اجراء Quiz بشكل دورات منتظمه و ايضا صوتوا للأسلوب تعليمي تكون المشاركه فيه بين الطالب و الاستاذ و هذا للاجل لرفع المستوى التعليمي. اشار الطلاب الى ان اكبر فائده من هذه الماده الدراربه هو تشخيص امراض الفم.

**الاستنتاج:** نظرا الى الاستفادة من آرا الطلاب في مجال تعليم ماده الباتولوجی للفك و الفم و الوجه في هذه الدراره اضافه الى الحصول على اعلى حد من الرضا و اكبر مشاركه من الطلاب في الدروس و ايجاد تغييرات مختصره نحصل افق مضى في تحسين كيفيه التدريس. **الكلمات الرئيسية:** طالب طب اللسان، باتولوجی الفم و الفك و الوجه.

### مشهد ڈینٹل کالج میں صورت جیڑے اور منہ کی بیماریوں تعلیمی نصاب کے بارے میں طلباء کے نظریات

**بیگ گراؤنڈ:** صورت جیڑے اور منہ کی بیماریاں کا موضوع میڈیکل سائنس کا ایک اہم موضوع ہے جو عام طب اور ڈینٹل شعبے کے درمیان رابطہ قائم کرتا ہے۔ اسی موضوع کے تحت بہت سے دیگر اہم کلینیکل مسائل آتے ہیں۔ چونکہ تعلیمی سسٹم اور نصاب کا جائزہ لیتے رہنے سے سسٹم اور نصاب کی کمزوریوں اور مثبت پہلوؤں کا پتہ چلتا ہے۔ اس تحقیق میں ڈینٹل شعبے اس اہم موضوع پر طلباء کے نظریات جاننے کی کوشش کی گئی تا کہ نصاب کو بہتر بنایا جاسکے۔ یہ تحقیق مشہد ڈینٹل کالج میں انجام دی گئی۔

**روش:** یہ ایک وقتی اور تجزیاتی تحقیق ہے جو دو ہزار نو اور دو ہزار دس میں انجام دی گئی تھی۔ اس میں تیسرے سال سے آگے کے طلباء کو شریک کیا گیا تھا جنہوں نے صورت، جیڑے اور منہ کی بیماریوں کا موضوع منتخب کیا تھا۔ اس تحقیق میں دو سو پچاس طلباء نے شرکت کی۔ انہیں سوالنامے دئے گئے تھے۔ ڈینٹا کا تجزیہ ایس پی ایس ایس سافٹ ویئر کے تیرھویں نسخے سے کیا گیا۔

**نتیجے:** اس تحقیق سے پتہ چلتا ہے کہ تیسرے فیصد طلباء نے اس موضوع کی تھیوریٹیکل تعلیم سے اطمینان کا اظہار کیا ہے جبکہ اکیاسی فیصد طلباء نے پریٹیکل روش تعلیم سے مکمل اور متوسط اطمینان کا اظہار کیا ہے۔ طلباء نے کویز اور استاد طالب علم کی مشارکت کو بھی مفید قرار دیا ہے۔ طلباء نے کہا کہ اس موضوع کا سب سے زیادہ فائدہ منہ کی بیماریوں کی تشخیص میں ہوتا ہے۔

**سفارشات:** اس تحقیق سے طلباء کے نظریات کا بھی پتہ چلا اور یہ بھی معلوم ہوا کہ ان کی نظر میں طلباء کو تعلیمی سرگرمیوں میں شامل کرنے سے تعلیم کے بہتر نتائج نکل سکتے ہیں۔

**کلیدی الفاظ:** ڈینٹل کالج، منہ صورت اور جڑے کی بیماریاں۔

## INTRODUCTION

According to the constitution of the Islamic Republic of Iran and the World Health Organization's goals, reaching health for the whole nation is necessary. Considering this fact, the main aim of the Ministry of Health and Medical Education is to reach, maintain and improve people's health. It is obvious that training dentists should be in accordance with this aim (1). The curriculum of dentistry which has been used in dental schools throughout the country has been approved on May 20, 2000. In recent years, reviewing the curriculum of general dentistry seems inevitable, and measures have been taken in this regard. The new curriculum has been introduced to schools of dentistry (2). Periodic evaluation of the curriculum is of great importance in identifying issues and solving them.

Since students are the main receivers of dentistry education and directly face its issues, their experiences and points of view about the content, structure and quality of education are considered as a main part of quality control of the curriculum, its evaluation and a great resource for decision making (3, 4).

Oral and maxillofacial pathology deals with the nature and features of diseases concerning the oral and maxillofacial region. Thus, pathology is important regarding health care in medicine and dentistry. It is obvious that all dentists, general and specialist, should have adequate information about pathogenesis, clinical presentations, treatment and prognosis of oral diseases (5).

In the curriculum of dentistry, pathology is considered as an important basic science relating dentistry to medicine and is the basis of learning many principles of clinical courses. In the current curriculum, this course has six theoretical and practical units, and in the new curriculum, along with the practical course, the theoretical course includes systemic diseases, diagnostic dentistry, tooth decay, pulp and periapical diseases, which deals with the origin, diagnosis, control and management of patients with lesions in oral and maxillofacial region and its reports are considered as gold standard in diagnosis (5, 6). A study by Grogoriam in 2002 showed the importance of basic sciences in solving clinical issues by dentists. Pathology, as a theoretical science, has a close connection with the clinic. Today, many new methods as tissue biochemistry, electron microscope and radioisotope are available for pathologic studies (7).

Since students are rather uninterested in learning the material of this course, efforts should be made in this regard so that they learn better. A study by Jahantigh et al. in 2010 investigating educational needs of restorative dentistry by alumni opinions showed that there are some deficiencies in the restorative course (2). In the study of Sanatkhani et al. regarding students' opinions about teaching and evaluation method in clinical courses in Mashhad School of Dentistry, students believed that there is no significant difference in teaching and evaluation methods among different departments (8). Henzi investigated the dentistry curriculum in different schools of dentistry in the United States and Canada in 2007 and concluded that students are satisfied with their educational

experiences in general (9). Unfortunately, no study has been done about basic sciences.

Investigating students' opinions helps better planning to improve the educational quality of the pathology course by modifying the volume, content, number of units and teaching hours of the course. In a study by Moezi in 2009, 89% of the participated students confirmed the efficiency of evaluation by professor and 53% believed this has positive impacts and mentioned scientific knowledge and teaching method as features of a good professor (10).

The purpose of this study was to investigate students' opinions about oral and maxillofacial pathology course in Mashhad School of Dentistry in 2009-2010 academic year to be a basis for future studies.

## METHODS

This is a cross-sectional research conducted on 250 students of Mashhad School of Dentistry who were passing their third to sixth years of study in 2009-2010 academic year. Census was used for sampling. All students in their third to sixth years of study, either were passing or have passed the pathology course, and were willing to answer the questions participated the study. Students who have passed oral and maxillofacial pathology in other universities were not participated. Also, students could be excluded from the research while answering the questions if they were not willing to continue. Field method was used for data gathering, and data gathering tool was a researcher made questionnaire consisted of 21 questions, which was designed by consulting with oral and maxillofacial pathology members of faculty. The questionnaire was consisted of closed and open-ended questions covering different aspects of teaching oral and maxillofacial pathology.

For validation, the questionnaire was presented to four faculty members of the oral and maxillofacial pathology department and their opinions were included in the questionnaire. To investigate the reliability of the questionnaire, a pilot study was conducted on 40 students in two sessions with two-week intervals; the reliability coefficient was upper than 70 percent. In the second semester of the 2009-2010 academic year, unnamed questionnaires were distributed among students of third, fourth, fifth and sixth years. Students were informed about the subject and goals of the questionnaire before filling it. After gathering the questionnaires, they were coded (multiple choice questions were coded based on the number of choices) and were descriptively analyzed using statistical software and tests.

Variables investigated in this study were the students' attitudes toward different aspects of theoretical and practical courses of oral and maxillofacial pathology, and their success rate in passing the course, which were calculated using the frequency of answers to each question. These questions were about students' opinions regarding the necessity of passing oral and maxillofacial pathology course, the number of course units, schedule, teaching method, examination method, application in other fields of dentistry, and the effectiveness of this course in diagnosis and treatment of patients.

SPSS 13 was used for data analysis. Descriptive statistics including frequency distribution tables, central tendencies, indexes of dispersion, and statistical charts were used for data description.

## RESULTS

This study was conducted on 250 students of Mashhad School of Dentistry who have passed theoretical and practical courses of oral and maxillofacial pathology. All students were included completely and answered the questions.

88 (19.68%) of all students failed to pass the pathology courses 1 and 2 at the first time. They believed the most important reasons for failure were being uninterested in the lessons (44.3%), high volume of the course material (37.1%), and difficult examinations (22.9%); only 18.6% mentioned improper teaching as the cause of their failure. A great number of students (42.4%) believed that the number of units of theoretical pathology course are too high, while 54.4% stated that the number of units of practical pathology course is appropriate (Table 1). In this study, most students (52%) believed that the volume of the pathology course material is not in accordance with its number of units (each unit equivalent to 17 hours) and it's heavy.

Most students (68.8%) believed that it is better to pass theoretical and practical pathology in the third year, like the current curriculum. (Table 2).

Most students were relatively satisfied with the teaching methods (Table 3). Regarding educational improvement methods, 42.9% of students chose quizzes, 16.5% chose only lecturing, 8.2% chose question and answer, and 25.3% chose teacher-student participation.

Regarding the evaluation methods, most students (86.6%) preferred multiple-choice questions (Table 4).

Regarding the application of oral pathology course's results in other dentistry fields, students believed that it is mostly applicable in the diagnosis of oral diseases and least in prosthesis (Table 5).

Regarding the necessity of oral pathology in dentistry, the following topics were believed to have the most importance respectively: identifying diseases of the oral cavity and maxillofacial diseases (25%), no necessity (18.7%) and identifying pathologic lesions microscopically and how to diagnose them (14.6%) (Table 6).

## DISCUSSION

Periodic investigation of teaching and evaluation methods is significantly important in identifying issues and solving them.

**Table 1. Students' opinions about the number of units of theoretical and practical pathology course**

Course	Students' opinions				Total Frequency (percent)
	Is low Frequency (percent)	Is high Frequency (percent)	Is appropriate Frequency (percent)	have no idea Frequency (percent)	
Theoretical pathology 1 and 2	15 (6)	106 (42.4)	101 (40.4)	28 (11.2)	250 (100)
Practical pathology 1 and 2	25 (10)	64 (25.6)	136 (54.4)	25 (10)	250 (100)

**Table 2. Students' opinions about years when it is more appropriate to pass theoretical and practical oral pathology**

No.	Students' opinions				Total Frequency
	Same as current curriculum	Should be continued to fourth year	Should be continued to fifth year	Should be continued to sixth year	
172	38	23	17	250	
Percent	68.8	15.2	9.2	6.8	100

**Table 3. Students' satisfaction with the methods of offering courses in theoretical and practical pathology**

Course	Students' opinions			Total Frequency (percent)
	Completely satisfied Frequency (percent)	Relatively satisfied Frequency (percent)	Unsatisfied Frequency (percent)	
Theoretical Pathology	13 (5.2)	145 (58)	92 (36.8)	250 (100)
Practical Pathology	33 (13.2)	162 (68.4)	55 (22)	250 (100)

**Table 4. Students' opinions about examination types proper for the oral pathology course examination**

Students' opinions					
Examination type	Multiple-choice	Written Tests	Blank-filling	Matching	OSCE
Frequency (Percent)	214 (86.6)	17 (6.9)	26 (10.5)	57 (23.1)	4 (1.6)

**Table 5. Students' opinions about the application of oral pathology course's results in other dentistry fields**

Students' opinions									
Dentistry fields	Oral diseases diagnosis	Oral radiology	Oral and maxillofacial surgery	Periodontology	Endodontics	Pediatric dentistry	Orthodontics	Restorative	Prosthesis
Frequency (percent)	178 (74.8)	104 (43.7)	50 (21)	23 (9.7)	17 (7.1)	7 (2.9)	6 (2.5)	3 (1.3)	1 (0.4)

**Table 6.**

Student's opinions	Frequency (percent)
Identifying diseases of the oral cavity and maxillofacial diseases	12 (25)
No necessity	9 (18.7)
Identifying pathologic lesions microscopically and how to diagnose them	7 (14.6)
It is not necessary for a general dentist, but it is important as a special field.	6 (12.5)
It is very applicable in case that the teaching method would be modified.	6 (12.5)
It is valuable as a basis for other courses.	6 (12.5)
As a physician, it is necessary to have general information.	2 (4.2)
Total opinions	48 (100)

Universities should constantly improve their educational quality (11). In Iran, first efforts for continuous evaluation of higher education were made in 1978 (8). In some studies, opinions of graduate dentists were used to evaluate educational system. Stewardson et al. investigated the ability of dentists in root canal therapy using their own feedbacks; subjects believed that their problem is mostly due to being unfamiliar with new techniques and equipment (12).

In 2011 Sivamalai et al. investigated teaching pathology using online digital microscope based on feedbacks of 53 medical students of James Cook University in their fourth and fifth years (13). Semyari et al. conducted a study in 2002 to investigate the efficiency of restorative and periodontology departments in reaching educational goals; the results showed that a review in curriculum and educational system seems necessary (14).

Most studies about dentistry curriculum are conducted on

professional institutions, alumni, faculty members, educational officials and dentists. There are few studies focusing on opinions of dentistry students (15). It seems that it is a better idea to evaluate educational system using students' opinions, since they are currently facing the issues, therefore they can easily offer their opinions and solutions. Furthermore, students are more easily accessible which makes the information richer and increases validity and reliability. Henzi et al. investigated curriculum of some dental schools of North America in 2007 (9). In this study we investigated students' opinions about different educational aspects of oral pathology course. The data gathering tool was questionnaire. The advantage of questionnaire is that it is more affordable and less time consuming and gathers a rather large amount of information. Also, it is easier to analyze questionnaire's data compared to other methods (3).

In the curriculum of Mashhad School of Dentistry, there are

two theoretical pathology courses (2 units each) and two practical pathology courses (1 unit each). Most students believed that the number of units for theoretical pathology courses 1 and 2 is too high and only 6% mentioned that this number is low, whereas for practical pathology courses 1 and 2, most students (54.4%) believed the number is appropriate. More than half of all students (52%) believed that the volume of the pathology course material is not in accordance with its number of units (each unit equivalent to 17 hours) and it's heavy. To explain this, we can say that most students emphasize on clinical sciences and are less willing to basic sciences, which arises the need to put more emphasis on informing students about the importance of basic sciences. No study was found that have covered all mentioned factors. It seems that the abundance and wideness of the course material along with lots of memorizing subjects can explain why students are uninterested in this course which leads to failure in gaining proper grades. According to the results of this study, more than 63% of students were moderately to completely satisfied with the teaching method of theoretical pathology course, and 82% with the teaching method of practical pathology course. Also, students were more satisfied with the teaching method of practical pathology course which may show that students are more willing to perform practical tasks. Thus, theoretical courses must be taught with methods that attracts students.

Mojabi's study in 2002 in Ghazvin Dental School showed that 43.3% of students were satisfied with their pathology department. Also in this study, 43.3% of students evaluated the planning of practical course as moderate (16). Semyari et al. in 2003 most students had more issues in the theoretical courses of restorative than in practical courses (14).

According to this study, students mentioned these methods as the best to improve educational quality, respectively: periodic examinations, teacher-student participation, and only lecturing. In a study by Talebi et al. in 2010, 67% of students believed that in teaching clinical pathology, question and answer method is more effective than traditional method, 36.5% of students mentioned that learning through group discussion is more effective than lecturing, whereas 30% were not satisfied with group discussion (17). Current study showed that only 8.2% of students were satisfied with the question and answer method, whereas 42.9% believed that periodic examination is more appropriate in improving educational quality. In a study by Delaram et al. in 2009, 57.6% of participated faculty members used lecturing and question and answer method, 10.8% used only lecturing method and the rest used a combination of these along with lectures by students, group discussion, problem solving, ward rounds and practical training (18).

According to this study, pathology course findings are most

applicable in these fields, respectively: oral diseases diagnosis, oral radiology, oral and maxillofacial surgery, whereas they are least applicable in these fields, respectively: prosthesis, restorative, and orthodontics. Although it seems that pathology has no direct relationship with other fields of dentistry, it does not mean that this field is not necessary for general dentists. Since general dentists are the first who visit oral patients, it is very essential for them to be familiar with pathology for screening and early detection of malignant lesions. As Grogorian mentioned in a study in 2002 that increase in theoretical information of dentists leads to better solving of clinical issues, and pathology, as a theoretical science, has a close connection with clinic (7).

According to this study, 86.6% of students preferred multiple-choice questions for the examination, and only 1.6% preferred OSCE questions. In a study by Noohi et al. in 2008, 84.3% of clinical faculty members participated in the study mentioned evaluation of clinical skills through OSCE as essential (19). In the study of Delaram et al. most faculty members used written tests and multiple-choice questions and 38.2% always held mid-term examinations and 88.3% considered final examination as the most important evaluation method (18).

Considering unique features of the pathology course, like being basic, difficult material and low income, measures should be taken to attract more people to continue education in this field.

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## CONCLUSION

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According to the results of this study, students mentioned these reasons for failure in pathology course, respectively: being uninterested in the course material, difficult material, and difficult examinations. Most students believed that the number of units of theoretical pathology course is high, whereas for the practical pathology course, number of units is appropriate. This study showed that most students are satisfied with teaching method of theoretical and practical pathology and suggested periodic examinations, teacher-student participation as methods to improve educational quality and mentioned multiple-choice questions as the best examination method.

Students believed that pathology course is mostly applicable in oral diseases diagnosis, oral radiology, and oral and maxillofacial surgery and mostly believed that the pathology course materials were rarely used in diagnosing and treatment of patients.

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