

### The Attitude toward Community-Based Education among Dental Students at an Iranian Dental School

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**Background:** Dental students' attendance in community fields prepares them to get involved in oral health promotion programs. The aim of this study was to evaluate dental students' attitude toward education in community dentistry fields at an Iranian dental school.

**Methods:** 125 dental students participated in a questionnaire survey. The questionnaire included questions regarding students' background specifications, their motives for entering dental school, students' opinion about the amount of acquired competency, and their attitude about educational experience in the community dentistry fields.

**Results:** More than two-thirds of the students (78%) assessed educational experience of community dentistry fields as positive. Students' main motive for entering dentistry school was acquisition of social prestige. About 80% of the students described their acquired competency as average and high. Students with higher social attitude scores and those who reported more acquired competency were more probable to evaluate their attendance in community dentistry fields as positive (p-value = 0.04 and 0.01 respectively).

**Conclusion:** students with higher socially conscious attitude and those who reported more acquired competency expressed their community dentistry field's education experience as more positive.

**Key words:** Dental Student- Community Dentistry- Attitude- Perception- Education

### نظرة طلاب اهدى كليات طب اللسان في ايران تجاه التعليم البتني على المجتمع .

**التصميم و الهدف:** إن حضور طلاب اللسان في مختلف المجالات الاجتماعية يساعدهم على المشاركة في برامج لرفع مستوى صحة الفم. الهدف من هذه الدراسة تقييم نظرة طلاب اهدى كليات طب اللسان في ايران تجاه التعليم في المجالات المختلفة الاجتماعية .

**أهلوب العمل:** انتترك ١٢٥ طالب في هذه الدراسة التي تم جمع المعلومات عبر استمارات. كانت تشمل الدراسة على اسئلة تتعلق بخصوصيات ذاتية عند الطالب والهدف من الدخول الي كلية طب اللسان و ما هو رأيهم في تجاربهم التعليمية في المجالات المختلفة الاجتماعية.

**النتائج:** هناك أكثر من ٢/٣ من الطلاب ٧٨٪ اعتبران التجربة التعليمية في المجالات الاجتماعية ايجابية. إن الهدف من الدخول كلية اللسان هوالموقع الاجتماعي و اعتبر ٨٠٪ من الطلاب إن المراتب المكتسبة متوسطة و عالية. والذين كان قد اعتبروا ان المراتب المكتسبة هي اعلى كان لهم ارتباط أكثر بمستوى المشاركة في البرامج الاجتماعي p value: 0.01 و 0.04 value.

**الاستنتاج:** إن الطلاب الذين كانوا قد سجلوا مشاركة أكبر في مجال المشاركات الاجتماعية كان عندهم نظرة اجتماعية و مهاره أكبر وأتمل من غيرهم .

**الكلمات الرئيسية:** طالب كلية طب اللسان . رؤية . نظر. تعليم . طب اللسان الاجتماعي .

### نگرش دانشجویان یکی از دانشکده های دندانپزشکی ایران نسبت به آموزش مبتنی بر جامعه

**زمینه و هدف:** حضور دانشجویان دندانپزشکی در عرصه های مختلف جامعه آنها را برای مشارکت در برنامه های ارتقاء سلامت دهان آماده می سازد. هدف از این مطالعه ارزیابی نگرش دانشجویان دندانپزشکی نسبت به آموزش در عرصه های مختلف دندانپزشکی اجتماعی در یکی از دانشکده های دندانپزشکی ایران بود.

**روش کار:** ١٢٥ دانشجوی دندانپزشکی در مطالعه ای پرسشنامه ای شرکت کردند. پرسشنامه شامل سوالاتی در مورد خصوصیات زمینه ای دانشجویان، انگیزه ورود آنها به دانشکده دندانپزشکی، نظر آنها نسبت به میزان مهارت کسب شده و نگرش آنها در مورد تجربه آموزشی در عرصه های دندانپزشکی اجتماعی بود.

**یافته ها:** بیش از ٢/٣ دانشجویان (٧٨٪) تجربه آموزشی در عرصه های دندانپزشکی اجتماعی را مثبت ارزیابی کردند. انگیزه اصلی آنها برای ورود به دانشکده دندانپزشکی کسب موقعیت اجتماعی بود. حدود ٨٠٪ دانشجویان میزان مهارت کسب شده را متوسط و بالا توصیف کردند. آن دسته از دانشجویانی که نمره نگرش اجتماعی بالاتری داشتند و آنهایی که مهارت کسب شده بیشتری را گزارش کردند احتمال بیشتری داشت که حضورشان در عرصه های دندانپزشکی اجتماعی را مثبت اعلام کنند (به ترتیب Pvalue = 0/04 و Pvalue = 0/01).

**نتیجه گیری:** دانشجویانی که نگرش اجتماعی آگاهانه بالاتری داشتند و کسانی که مهارت کسب شده بیشتری را گزارش کردند تجربه آموزشی خود در عرصه های دندانپزشکی اجتماعی را مثبت تر اعلام کردند.

**واژگان کلیدی:** دانشجوی دندانپزشکی، دندانپزشکی اجتماعی، نگرش، دیدگاه، آموزش

### سماجی امور کے تعلق سے ایران کی ایک ڈینٹل کالج کے طلباء کی نظر کا جائزہ .

**بیک گراؤنڈ:** زندگی کے مختلف سماجی شعبوں میں ڈینٹل طلباء کی موجودگی انہیں اپنی پیشہ ورانہ کو بہتر بنانے میں مدد دیتی ہے۔ اس تحقیق کا مقصد سماج کے مختلف شعبوں میں ڈینٹل ڈاکٹروں کی سرگرمیوں کا جائزہ لینا ہے۔

**روش:** اس تحقیق میں ایک سو پچیس ڈینٹل طلباء نے شرکت کی۔ انہیں سوالنامے دئے گئے جن میں ڈینٹل کالج میں ان کے داخلے کی وجوہات، ڈینٹل طلباء کی خصوصیات، ان کی مہارتوں اور سماجی شعبوں میں ان کی موجودگی کے اثرات کے بارے میں سوالات تھے۔

**نتیجے:** دو تہائی طلباء نے سماجی شعبوں میں ڈینٹل ڈاکٹروں کی موجودگی کو مثبت قرار دیا۔ انہوں نے ڈینٹل کالج میں داخلے کی وجہ یہ بتائی کہ وہ سماج میں اچھا مقام حاصل کرنا چاہتے ہیں۔ اسی ٨٠ فیصد طلباء نے حاصل شدہ مہارت کو اعلیٰ اور متوسط قرار دیا۔

**سفارشات:** سماجی لحاظ سے جن طلباء کی معلومات زیادہ تھیں اور ان کی مہارت بھی اعلیٰ درجے کی تھی انہوں نے سماجی شعبوں میں ڈینٹل ڈاکٹروں کی سرگرمیوں کو مثبت قرار دیا ہے۔

**کلیدی الفاظ:** ڈینٹل طلباء، سماج، نظر، تعلیم .

## INTRODUCTION

Community-based dental education deals with underlying factors causing oral disease, economic-political and socio-cultural aspects of oral health and disease. On the other hand, this approach tries to eliminate the side effects of oral diseases. Such training prepares students who cooperate with different social organizations for improving community oral health by identification of disease-causing factors, preventing and treating oral diseases. Community-based dental education approach illustrates the perspective of health-oriented dentists who practice in a larger social context compared with treatment-oriented dentists who practice in their private office [1,2]. For developing countries, this approach needs to promote in order to tackle with limited resources.

In Iran, since 1992 Oral Health and Community Dentistry is taught in a theoretical credit in dental schools. Since 2000, 5 practical credits have been added. Expected competencies for the Practical Community Dentistry course have been presented by the Ministry of Health, Treatment and Medical Education [3]. In Mashhad Dental School, Oral Health and Community Dentistry Department was established in 2007. Practical community dentistry is presented in three separate credits in semesters 8, 9, and 10 (which representing community dentistry course 1, 2, and 3, respectively) of the 11-semester undergraduate dental curriculum. In each of these credits, dental students attend workshops and community dentistry fields for 7 weeks. In the second practical course, students start going to community fields in order to get access to a special group of the whole population. Examples of such community fields are kindergartens, schools, elderly nursing homes, centers for patients with special treatment needs like mental and physical handicaps, cancer, kidney diseases, thalassemic, and hemophilic patients, factories, addicted drop-in centers, special schools for deaf and blinds, orphanages and women heads of family centers that supported by Welfare Organization.

The aim of education in community dentistry fields is to put the students, as a member of community health team, in real social situations. This will make them familiar with different social groups and their health needs. In addition, students analyze and interpret possible associate factors with the oral diseases, and inform authorities about the oral health needs of their community. Identifying students' opinions and attitudes toward education in this newly established department is in line with promoting the mission and goals of this course [4].

Increased enthusiasm towards education in community fields is not limited to dentistry but it is now important in other health related professions as well [5].

In 2009, the study of American Dental Education Association on changes in dental school curriculum over the last 10-years showed that the number of dental schools with 5 or more weeks of community-based rotation increased from 8 to 28 [6]. Commission on Dental Accreditation in the United States of America recommended that community-based dental education must be an essential

part of dental students' education [7]. In Iran, studies focusing on the outcomes of community-based dental education and dental students' attitude toward it are rare [8].

The aim of this study was to evaluate the attitudes of dental students toward educational experience in community dentistry fields at an Iranian dental School. Also as an objective students' motives for selecting dentistry as a career was assessed.

## METHODS

The present study was a cross-sectional questionnaire-based survey. 125 dental students who had already passed Practical Community Dentistry course 2, have been surveyed from November 2010 to March 2011. All the students received the questionnaire. The validity of the questionnaire was assessed and confirmed by a group of experts in Mashhad University of Medical Sciences (Mashhad, Iran) and Shahid Beheshti University of Medical Sciences (Tehran, Iran). Chronbach's reliability coefficient was 0.8 for each question.

The questionnaire comprised of three parts: Part I consisted of questions about personal characteristics of students including age, gender, marital status, occupation of each student's father and mother, previous engagement in oral health occupation, and the number of passed Practical Community Dentistry course. Part II questioned students' motives for entering dentistry school, students' attitude about educational experience in community dentistry fields, students' social attitude toward community oral health promotion, students' opinion about acquired competency in community dentistry fields and time dedicated to it. Part III of questionnaire focused on days spent on each of the community dentistry fields.

To study students' motives for selecting dentistry as a career, they were asked: "What was your main reason for choosing dental school?" The answer items were as follow: 1-self employment, 2-helping people to improve their health, 3-potential of high income, 4-to acquire social prestige, 5-enjoying practical works, 6-diversity of work options in dentistry, 7-controlling time to spend with family and personal interests, and 8-having a role in improving community health. Students had to give a score from 1 to 5 to each item depending on their priority for choosing dental school, 1 means not important and 5 means very important.

Two items: "helping people to improve their health" and "have a role in improving community health" were used to create socially conscious attitude scale. Scale score ranged from 2 to 10, with score 10 representing great enthusiasm for helping people, and score 2 indicating weak social attitudes towards serving people. Scores from 2 to 5 categorized as low, 5 to 7 as average, and equal and over 7 as high.

To evaluate students' acquired competencies in each of the fields corresponding questions were designed in the questionnaire. These competencies were as follow: "oral health education to target groups", "assessing and documenting oral health status based on the world health

organizations' standard forms", "planning, performing and evaluating a preventive program for target group", "preparing a supplemental teaching tools like poster and pamphlet for target group", and "analyzing social and environmental factors' effect on oral health of target group". For each competency, scores were assigned from one to five; score one stood for "very low competency" and five for "very high competency". Total competency score was calculated as sum of scores for each competency with a theoretical range of 5-25. For further analysis, total competency scores were categorized as follow: 5-12 as "low competency", 13-17 as "medium competency" and 18-25 as "high competency".

In the next part questions, students provided their opinions about the adequacy of time dedicated to each of the topics related to Practical Community Dentistry course. The answer options were inadequate, appropriate, and excessive, with respectively assigned scores -1, 0, and 1. Then scores from all five areas of competencies related to course topics summed together. Finally, if the final score was negative we considered it as "inadequate", zero was considered as "appropriate" and positive scores was considered as "excessive".

In the last question, "what is your attitude about the experience of community dentistry field?" students had to mark one of the items: very positive, positive, no comments, negative, and very negative, with scores five, 4, 3, 2, and 1 assigned to each item respectively. For further analysis, scores 1-2 regarded as negative attitude, 3 as neutral, and 4-5 showed positive attitude toward educational experience. Finally, for determining frequency of each field, students were asked to report the number of their participation in each community dentistry field separately.

In this study, the Chi-square test served as statistical analysis.

**RESULTS**

Totally, 94 out of 125 participants (75.2%) returned the completed questionnaires with a response rate of 75.2%. The average age of the respondents was 25.5 + 4.77 . The distribution of respondents' demographic specifications were summarized in Table 1. Students' main reasons for entering dentistry school were as follow: "Acquisition of social prestige" 94%, "potential for high income" 84%, and "opportunity of self-employment" 75%. Items "helping people to improve their health" and "have a role in improving community health" were the main reasons for 38% and 30% of students respectively. The frequency of "opportunity of self-employment" and "potential for high income" were more common between men rather than women (p=0.002 and p=0.02 respectively). "Have a role in improving community health" was a more important motive among females than males (p = 0.001).

In attitude regards, 77.7% of students reported positive educational experience in community dentistry fields, 16% had no comment and 6.3 % evaluated the experience as negative.

The most frequent acquired competency by students was "training oral health to target groups" and the less frequent acquired competency was "preparing a supplemental teaching tool like poster and pamphlet for the target group". Seventy-nine percent of students considered their acquired competency as average or high (Table 2).

Acquired competency among students with parents in medical profession were significantly higher than others (p=0.001). Students with higher socially conscious attitude scores obtained significantly higher competency scores compared with those with low socially conscious attitude scores (p=0.048).

**Table 1. Distribution (%) of the respondents' demographic characteristics**

Variable	Number	Percent
Gender	Female	62
	Male	38
Marital status	Single	54
	Married	46
Parents occupations	medical- related	27
	non medical-related	73
Previous job as oral health worker	Yes	4
	No	96
Age	< 25 years	65
	≥ 25 years	35
Last community dentistry course passed	Practical Community dentistry Course 2	15
	Practical Community dentistry Course 3	85

**Table 2. Students' opinion about acquired competency from community dentistry field's education**

Desired skills in community dentistry fields	Student competency (percent)		
	Low	Average	High
Skills related for training oral health to target groups	12	40	48
Documenting oral health statuses based on the world health organizations' standards	28	34	38
Planning, performing and evaluating a preventive program for target group	32	24	44
Preparing a supplemental teaching tools like poster and pamphlet for target group	38	26	36
Analyzing social and environmental factors effect on oral health of target group	29	29	42

**Table 3. Students' opinion about time dedicated to community dentistry fields**

Desired skills in community dentistry fields	Dedicated time (percent)		
	Inadequate	Appropriate	Excessive
Required skills for training oral health to target groups	29	65	6
Documenting oral health based on WHO standards	20	63	17
Planning, performing and evaluating a preventive program for target group	41	52	7
Preparing a supplemental educational tool like poster or pamphlet for target group	44	53	3
Analyzing social and environmental factors effect in oral health of target group	23	68	9

Students' opinion about the adequacy of time dedicated to community dentistry fields was shown in Table 3. 60.2% reported the time as "appropriate" and a few considered it "excessive". Students' answers about the number of times they participated in different community dentistry fields showed that the highest rate of participation was for schools and the lowest one was for geriatric nursing homes. The mean of students' participation times in community dentistry fields was  $7.19 \pm 3.0$ .

## DISCUSSION

In this study we evaluated dental students' attitude toward community-based education in Mashhad Dental School. Based on our findings most (77.7%) of the students declared educational experience of community dentistry field as positive. In Third study 64.7% of students reported that experience from community dentistry rotations was positive which was similar to us [9]. Since in our study a few of the students' attitude was negative, the reason for this negative view must be asked in more comprehensive studies which provide information about the most positive and negative educational experiences in community dentistry fields.

In the present study, "acquisition of social prestige", "potential for high income" and "opportunity of self-employment" were the most important motives for entering dental school. It is to some extent consistent with Khami's finding [10]. He stated that social status and personal interest were the most important motives for studying dentistry. Also our finding is in line with the finding of a

study on dental students in Tehran in which "Acquiring high social status" and "helping society" have been reported as the two main motives for choosing dentistry [11]. Vahid Dastjerdi reported that social factors are important motives among dental students [12]. According to Crossley and Mubarik study in Manchester, England, medical students reported "interest in helping others" and "intellectual challenge" and dental students reported "economical and personal benefits" as the most important motives for choosing their career [13]. It seems that social status and high income in dentistry attracts people to this career.

In our study, "helping others to improve their health" and "having a role in improving oral health of the society", which represent socially conscious attitudes, were not important motives for students. This is in contrast with the finding of the Ravaghi et al.'s study [11]. This contradiction may be due to 10 years interval between the two studies which may affect dental students' motives as a result of social changes. The other explanation may be the difference in the grade of the students in two studies (first year students in the study of Ravaghi et al. compared to 5<sup>th</sup> and 6<sup>th</sup> year students in the present study). It may be that faculty contextual environment affects students and changes their motives.

In this study, "opportunity for self-employment" and "potential for high income" were the most important motives among males and "having a role in improving society health" was the most important among females. This is in line with the Ravaghi's et al.'s study which showed stronger economical motives among male students due to their main role in family income [11].

We found no significant relation between students' attitudes toward community dentistry fields and reported adequacy of time, which is in contrast with Thind's study [9]. Our results showed that students who reported community dentistry field's education time as "appropriate" (most of the participants) did not show more positive attitudes comparing with other participants. This finding showed that besides time sufficiency, there are other factors that affect students' attitudes; these factors may have relation with the quality of educational sessions.

Most of the participants reported the amount of acquired competency as "acceptable", but there is room for improvement in this area. It is possible that students estimate their competency more or less than real. To resolve this problem, skill-evaluation tests should be used in future studies, but it costs some expenses.

We found out that students who reported more acquired competency, also showed more positive attitude. This finding showed that if community-based-education increase students' skills, it will produce more positive attitudes in them. Our results also showed that students with higher socially conscious attitudes think that they acquired more competencies in community fields. It is obvious that students who are more enthusiastic toward improving community health, are more successful in learning social skills.

Based on our results, there weren't any significant relations between students' individual specifications and their attitudes toward educational experience in community fields. In Thind's study student race was effective in their attitudes towards community-based education [9].

We found out that students with higher socially conscious attitudes, evaluated their community experience more positively, which is similar to Thind's finding [9]. Based on our description students with higher socially conscious attitudes have stronger motives for serving people and improving oral health of the society, which is one of the

most important goals of dental community-based education. Therefore, it seems that attendance in community dentistry fields was able to meet competency and emotional expectation of enthusiastic students.

Finally, we found no significant relation between the number of participation times in community dentistry fields and students' attitude toward this educational experience. However, Thind reported in their study that students who spent only one to two weeks in community dentistry fields expressed less positive experience compared with others [9]. It may be concluded that we should add some initiatives and innovations, like effective preventive interventions to our community-based education to increase students' satisfaction.

In community dentistry fields of Mashhad University Dental School, dental students should do oral examination of target groups, educating them oral health, and fluoride therapy with fluoride varnish for children. However, in many countries community dentistry fields are longer and include treatment interventions as well. Based on students' opinion, community dentistry fields were able to increase students' competency in optimal level, therefore, it is recommended that educational programmers pay more attention in this regard.

According to our study socially conscious attitude was a positive factor in acquired competencies and attitudes toward community dentistry fields. Unfortunately, this factor was weak among our students. It is recommended that to improve students' social attitudes and to increase their motivation for serving, comprehensive educational programs be designed for all dental departments.

As a conclusion most of the students evaluated their community dentistry field's experience as a positive experience. Students with higher socially conscious attitudes and those who reported more acquired competency, expressed their community dentistry field's education experience as more positive.

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