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

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

نوشته مورد امتحان کلیات طب پستان در ایران تجربه علمی

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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, orphans 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 \pm 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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58</td>
<td>62</td>
</tr>
<tr>
<td>Male</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>Married</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td><strong>Parents occupations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>medical-related</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>non medical-related</td>
<td>69</td>
<td>73</td>
</tr>
<tr>
<td><strong>Previous job as oral health worker</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>No</td>
<td>90</td>
<td>96</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 25 years</td>
<td>61</td>
<td>65</td>
</tr>
<tr>
<td>( \geq 25 ) years</td>
<td>33</td>
<td>35</td>
</tr>
<tr>
<td><strong>Last community dentistry course passed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical Community dentistry Course 2</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Practical Community dentistry Course 3</td>
<td>80</td>
<td>85</td>
</tr>
</tbody>
</table>
Table 2. Students’ opinion about acquired competency from community dentistry field’s education

<table>
<thead>
<tr>
<th>Desired skills in community dentistry fields</th>
<th>Student competency (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Skills related for training oral health to target groups</td>
<td>12</td>
</tr>
<tr>
<td>Documenting oral health statues based on the world health organizations’ standards</td>
<td>28</td>
</tr>
<tr>
<td>Planning, performing and evaluating a preventive program for target group</td>
<td>32</td>
</tr>
<tr>
<td>Preparing a supplemental teaching tools like poster and pamphlet for target group</td>
<td>38</td>
</tr>
<tr>
<td>Analyzing social and environmental factors effect on oral health of target group</td>
<td>29</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Desired skills in community dentistry fields</th>
<th>Dedicated time (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inadequate</td>
</tr>
<tr>
<td>Required skills for training oral health to target groups</td>
<td>29</td>
</tr>
<tr>
<td>Documenting oral health based on WHO standards</td>
<td>20</td>
</tr>
<tr>
<td>Planning, performing and evaluating a preventive program for target group</td>
<td>41</td>
</tr>
<tr>
<td>Preparing a supplemental educational tool like poster or pamphlet for target group</td>
<td>44</td>
</tr>
<tr>
<td>Analyzing social and environmental factors effect in oral health of target group</td>
<td>23</td>
</tr>
</tbody>
</table>

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 ± 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 "Aquiring 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 Mubarak 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 5th and 6th 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.

REFERENCES