

Original Research

Motivations for Choosing Field of Study among Medical and Dental Students of Tabriz University of Medical Sciences, Tabriz, Iran

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Abstract

Introduction: Our aim was to evaluate factors affecting the choices made by first-year dental and medical students in Tabriz University of Medical Sciences, Iran.**Methods:** The subjects in the present descriptive cross-sectional study consisted of 104 first-year dental and medical students in the University in 2012–2013. A questionnaire was given to the students, which included demographic data and prioritization of motives. In designing the questionnaire, nine items were taken into account including income, social status, owning a private office, serving the community, feasibility of working with the hands, self-regulation of working hours, an interest in the field, recommendation by the family and communication, and contact with community members. Data were analyzed with the Mann-Whitney U test using SPSS.**Results:** Enjoying a high social status was the most important factor (94.2%) in choosing dentistry as a major by dental students. An interest in the field (88.2%) was the second factor in their selection of dentistry. Recommendation by the family and serving the community with a frequency of 50% and contact with community members with a frequency of 51% were the least important in choosing dentistry. A high social status (75%) was the most important factor in choosing medicine as a major by medical students. A high income (73.1%) was the second factor in choosing medicine for them. Serving the community with 43.1% and the feasibility of working with the hands with 28.9% were the least important factors in choosing medicine.**Conclusion:** Dentistry and medicine are professions that still enjoy a high social status and most students choose these majors in order to attain such status. Differences in motives behind choosing a major by students of these two fields are related to the nature of the professions.

Introduction

Identification of factors involved in choosing a major by university students is very important and necessary because choosing a major which is in conflict with the individual's interests, tastes, talents and capabilities might result in unfavorable mental, social and economic effects in the long term. Choosing a major, as one of the most important decisions of a person's life, is associated with many difficulties and sensitivities. In this context, choosing dentistry and medicine should be carried out with great care and a high level of awareness because most previous studies have shown that dentists and physicians can rarely change their careers.¹

Dental education takes a long time, with heavy costs on the individual and society.² Various studies have been carried out in different countries on factors and motives effective in choosing dentistry and medicine as university majors. These studies have shown that students evaluate a number of factors when they want to choose their majors

and might consider some factors as more important than others based on their needs and expectation.³⁻⁹

The majority of first-year dental students in Britain in 1991 reported that they had chosen their major to serve the community. Income ranked the sixth among reasons to choose dentistry in Britain.¹⁰ A comprehensive evaluation of dental students in the United States in 2002 showed that the ability to self-regulate working hours and serving the community were the most important motives in choosing dentistry. Income was the fourth most important motive in that study.¹¹ A comparative evaluation of medical and dental students in Britain in 2003 showed that the majority of medical students had chosen medicine to serve the community and because of their interest in the medical science, but dental students had chosen dentistry in order to have a high income and to attain a high social status.¹² Earning a good reputation and social esteem are other important motives associated with choosing the dental

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profession. In Tanzania, the majority of dental students choose dentistry in order to win social respect.¹³ The results of a long-term study showed that the effect of the factor of social respect on choosing dental profession is on the rise.¹⁴

A study by Crossley on dental students in the University of Manchester showed that financial motives such as high income and financial security were very important for such students and factors such as helping the people were less important. However, medical students placed greater emphasis on motives such as serving the community, and financial motives were less important.¹³ Iran has a very small number of studies in this field.^{15,16} Based on these studies, we know that students' motivations in various areas are different and due to the influence of cultural, climatic, economic, and other factors on students' motivation in choosing a program, it is necessary that these studies evaluate such factors. Knowledge of the reasons that students choose a field of study is useful in understanding their perception of the nature of the discipline. With this knowledge, administrators can correct the view of universities' entrance volunteers toward the realities of the field according to the rules and conditions governing the community, to reduce the student rate of changing field, and to provide the academic progress and success of students. This study, therefore, aimed to determine the motivation of first-year medical and dental students in Tabriz University of Medical Sciences, Tabriz, Iran.

Materials and Methods

In the present descriptive cross-sectional study, the statistical population consisted of all the first-year dental and medical students entering the university in 2011 in Tabriz University of Medical Sciences: 80 dental and 165 medical students. The sample size was determined with the use of power and sample size software. To this end, the minimum sample size was equal in both groups ($n = 52$) at power = 0.80 and $\alpha = 0.05$, with a mean difference of 1.5 between the two groups and $SD = 4$. Random sampling technique was used to select 52 first-year students in each faculty.

A researcher-made questionnaire was used to collect data, which consisted of students' demographic data and questions on motives to choose university majors; a total of nine motives were evaluated. The replies were provided using Likert's 4-grade scale (not important, rather important, important and very important) with scores from 1 to 4. In order to evaluate the validity of the questionnaire, it was submitted to four specialists (two professors in the Faculty of Dentistry or Medicine and two Psychology professors) and if any questions needed any modifications, necessary changes were applied. In order to test the reliability of the questionnaire, the questionnaire was given to 30 dental and medical students in a pilot study after its validity was confirmed and its reliability was calculated by Cronbach's alpha. After the questionnaire's reliability was confirmed, it was distributed among the students. The results of the pilot study on 30 first-year dental and medical students in April 2012 showed a Cronbach's alpha

of 0.86, i.e. the questions and the replies were suitable to evaluate the concepts in question. The factors involved in choosing dental and medical majors were evaluated using frequency and frequency percentages, and the correlation between selection of the major and gender and the parents' educational level was evaluated by Spearman's correlation coefficient. In addition, the Mann-Whitney U test was used to compare factors involved in choosing majors by dental and medical students.

Results

Aim 1: Determination of the motives of first-year dental students to choose this university major in Tabriz University of Medical Sciences

Aim 2: Determination of the motives of first-year medical students to choose this university major in Tabriz University of Medical Sciences

Evaluation of the correlation of factors affecting the choice of medicine as a major with gender and the parents' educational status showed that the fathers' educational status had a positive and significant correlation with factors such as serving the community and an interest in the field ($P < 0.05$), i.e. with an increase in the fathers' educational level, these two factors played a major role in choosing medicine. Mothers' education had no correlation with choosing a major by university students. In addition, there was a negative correlation between serving the community and the students' gender ($P < 0.05$). In other words, the factors of serving the community had a greater effect on female students' choice of medicine compared to male students.

Comparison of the two factors discussed above

Of the nine factors effective in choosing a university major, the five factors of contact with people, serving the community, family's recommendation, a high income, and career independence were equally important between medical and dental students (Table 1). The four factors of social status, an interest in the field, self-regulation of working hours, and the feasibility of working with the hands were significantly more important for medical students compared to dental students (Table 2).

Discussion

During the present study, we evaluated factors affecting the choices made by first-year dental and medical students in Tabriz University of Medical Sciences, Iran.

94.2% of dentistry and 75% of medical students in the present study believed that winning a high social status was the most important factor in their choice of majors. Respect and esteem are positive characteristics of medical and dental professions, which have been referred to in previous studies as reasons for choosing them.^{14,13} According to Gerbert (1992), dentists enjoy high social respectability whether considered alone or compared to other professions.³ Social respectability is the most important factor that results in job satisfaction for dentists.^{17,18}

The priority of the motive "social status" over the motive

Table 1. Evaluation of factors affecting the choice of dentistry by the students under study

	Not important		Rather important		Important		Very important	
	N	%	N	%	N	%	N	%
Contact with people	8	15.69	17	33.33	19	37.25	7	13.73
Serving the community	4	7.69	22	42.31	19	36.54	7	13.46
Social status	1	1.92	2	3.85	22	42.31	27	51.92
Family's recommendation	9	17.31	17	32.69	14	26.92	12	23.08
High income	5	9.62	8	15.38	17	32.69	22	42.31
Interest in the field	1	1.96	5	9.80	17	33.33	28	54.90
Private office and job independence	4	7.69	8	15.38	19	36.54	21	40.38
Self-regulation of working hours	8	15.38	12	23.08	17	32.69	15	28.85
Feasibility of working with the hands	15	28.85	10	19.23	12	23.08	15	28.85

Table 2. Evaluation of factors affecting the choice of medicine by the students under study

	Not important		Rather important		Important		Very important	
	N	%	N	%	N	%	N	%
Contact with people	9	17.65	19	37.25	15	29.41	8	15.69
Serving the community	5	9.80	24	47.06	12	23.53	10	19.61
Social status	3	5.77	10	19.23	20	38.46	19	36.54
Family's recommendation	5	9.62	18	34.62	15	28.85	14	26.92
High income	4	7.69	10	19.23	22	42.31	16	30.77
Interest in the field	11	22.00	13	26.00	17	34.00	9	18.00
Private office and job independence	4	7.69	14	26.92	17	32.69	17	32.69
Self-regulation of working hours	12	23.08	15	28.85	18	34.62	7	13.46
Self-regulation of working hours	20	38.46	17	32.69	9	17.31	6	11.54

“serving the community” is of significance. Previous studies, too, have shown the priority of factors such as social respectability over internal professional factors, such as serving the community and curing patients, among medical and dental students.¹³

The second most important motive to choose dentistry was an interest in this field, which differed from the results of studies by Rawaghi et al.¹⁵ in 2002 and Hashemipour¹⁶ in 2005, which can be evaluated considering the 10-year period between the two studies and changes in the large-scale policies of Iran's Health System. In addition, an increase in people's attention to oral hygiene in recent years and greater need of the country for participation of dentists in the scene, demonstrates that all the factors mentioned above have been effective in strengthening the motives of the students under study and inducing their interest in choosing dentistry.

The third most important factor in choosing dentistry by the students under study was career independence and the possibility to decide on working hours; the importance of the former shows a lack of economic security and a lack of support of the general health service of dentistry, resulting in the decision of many dental students to work in private clinics with greater job independence. This finding is consistent with the results of a similar study in Australia, which showed that

dental students in Australia consider job independence and having a private office as the most important factors affecting their choice.⁹ However, this finding is different from those of a study in Brazil, which might be attributed to the support from the government and large-scale policies of support of the dental profession by the Brazilian Health System, motivating dental students in Brazil to work in public sector clinics.¹⁹ The feasibility of working with the hands was less important than other factors for the students evaluated in the present study, which might be considered worrying because the dental profession is a combination of art and science. Therefore, it is expected that, due to the artistic aspects of this field, dental students should take into account their skills and abilities to use their hands.

In the present study, income was not an important factor affecting the students' choice, which is consistent with the results of Rawaghi et al.¹⁵ The position of income, in comparison with other factors, shows that the financial appeal of dental profession has declined. This finding does not necessarily reflect a decrease in dentists' income; rather, it might reflect a higher income in other professions. However, the effect of income should not be overlooked in relation to choosing the dental profession. In this context, the results of the present study show that male students paid more

attention to income in choosing dentistry compared to female students, which might be attributed to the social and cultural environment prevailing in Iran. In Iran, a man manages and provides for the family needs and supports the family from a financial point of view. Based on our results, it appears that students do not pay much attention to the opinions of their families in choosing their majors, which might be attributed to deficiencies in relationship between the parents and children or to a lack of sufficient familiarity of parents with the demands and abilities of their children. This finding is consistent with the results of similar studies in Iran¹⁶ and Scotland.¹²

The results of the present study showed that after social status and respectability, the second most important factor affecting medical students' choice of field was the possibility of having a high income, which is not consistent with the results of the majority of similar studies.¹³ The increasing role of income in influencing motives to choose medicine as a university major, compared to the situation a few years ago, might be attributed to the dwindling economy in the community and a lack of sufficient awareness of the students evaluated in the present study about the economic conditions the physicians are in at present. In the present study, serving the community and contact with people was not considered as important by the students in their choice of their majors, which is a little worrying. The nature of medicine necessitates the physicians to contact and deal with a lot of people with different cultures; therefore, apart from the challenges inherent in this profession, physicians should greatly love other people and should pay attention to the satisfaction achieved from serving other people. They should also have more extensive relationship and contact with their patients.¹⁶

In general, similarities in this study with results of other studies could be due to the fixed nature of these fields in different parts of the world. The differences could also be due to cultural and economic differences and occupational laws that govern in various communities. Therefore, for higher accuracy, it is suggested that a number of medical and dental students are randomly selected from different universities to conduct a larger study and the results can be generalized.

Furthermore, multiple evaluations of students during various stages of their studying time, the comparison between first-year and later years' students and comparing pre- and post-graduation status might be a consideration for future investigations.

Conclusion

Due to the limitations of this study, although there are some differences in the motivations of fields selection among the medicine and dentistry students, achieving a higher social status is the main reason for choosing these fields.

Ethical Issues

Participants' information was kept confidential.

Competing interests

The authors declare that there is no conflict of interests.

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