

## Priorities for Choosing the Postgraduate Course Indentistry and its Related Factors

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Health system has long been affected by social, economic and cultural factors. The present study attempted to take steps to investigate the motivations of the participants in the dental post-graduate examinations and the factors influencing their selection of place and field of study. In this cross-sectional study, data related to a number of applicants was collected using a questionnaire. The questionnaire contained questions related to demographic and socio-economic status, participants' choice of specialty courses in which the applicant has an interest, motivation behind applying for specialty course, and selection of the field of study. Chi square test was used for data analysis. In this study 377 people (57% males) participated in the trial by filling out the questionnaires in the academic year of 2014-2015. Results illustrated that there was a significant relationship between students' choice of study and gender ( $P < 0.001$ ). Study of the causes influencing the choice of place of study showed that females considered the most important factor to be family circumstances (36%) and the instructors of the dental schools (28%), while for male students the latter one (27%) was the most important cause ( $P = 0.016$ ). Students of both sexes considered the number of patients to be the least important reason for choosing a specific place of study. The study of the reasons for pursuing the academic career and their relation to sex of participants proved that there was a significant difference between the reasons and sex ( $P = 0.01$ ). Results showed that changes in economic, political and social factors had many effects on the public health. Careful planning may reduce the negative effects of such phenomenon.

**Key words:** Postgraduate; Specialties, Dental; Qualification; Dental Education; Dental Students; Careers; Graduate; Dental Practice Patterns.

Like many other social phenomenon, sanitation and healthcare have long been affected by social, economical, and cultural aspects of the society<sup>1,2</sup>. One factor that always influences the quality of provided services whether directly or indirectly is human motivation. Although this effect can be sometimes negative, human motivation is a

crucial factor for people to succeed. Some elements which can affect dentists' motivation are social, economical, and cultural aspects of the society which in turn influence the dental health of a society<sup>2-4</sup>. Dentistry has borne many changes so far including academic enhancement, and ongoing job satisfaction in the private sector. In addition, dentistry is now a varied and vast field of expertise indicating the need for making this subject more detailed and professional. Based on the aforementioned facts different studies have been performed career needs and developments in this area<sup>4-7</sup>.

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Numerous studies clarify that in the past two decades women have been more eager to embark on studying dentistry<sup>1-4</sup>. Besides, some other studies demonstrate that almost 96% of general practitioners (GPs) are willing to continue their education until being a specialist. The most important reasons why people choose this subject are job flexibility, and economical, medical, and personal motivations, whereas women opt this major based on their medical motivations and to work with people, while men favor dentistry due to economical motivations<sup>3,5</sup>. Furthermore, several studies have evaluated the causes for entering dental school and taking a specialty course in different cultures and societies. Results illustrate that choosing this branch of study depends on personal motivations which in turn depends on cultural and social elements<sup>6-11</sup>.

Considering the ratio of participants to capacity of dental schools, the debate on factors affecting academic and professional success and the reasons why people choose this field is controversial. Authorities and policy-makers can arrange their plans and programs based on the results of available studies for the betterment of the outcome of the dental schools<sup>1,12,13</sup>. Since training dental professionals may impose high financial costs on healthcare system, it is imperative to implement studies considering factors affecting the choice of study for medical and dental students in post-graduate courses<sup>14</sup>. Faculties can shape the framework of their policies in the field of education and treatment based on the motivations and needs of the post-graduate students; thus, quality of treatment of patients will be improved and their satisfaction will be raised<sup>15</sup>. This study examines the motivation of the participants of the post-graduate entrance examination and factors affecting the participants' choice of field and place of study based on their preferences before and after the results of the examination were announced.

#### MATERIAL AND METHODS

In this cross-sectional study data was collected from the participants by using a questionnaire. The questionnaire contained questions related to demographic status, socioeconomic status of the families, marital status,

participant's interest in the field of specialty courses, the reason and motivation behind applying for specialty course, and selection of the field of study. The questionnaire was applied on [www.sanjesh.org](http://www.sanjesh.org), the website of the center for implementing the entrance exams, for the participants of the 2014 national entrance examination of the dental specialty programs in coordination with Education Department of Ministry of Health at the time of application. Applicants were included in the trial provided that they were eligible to take the examination, and were excluded if they were reluctant to be a part of the trial, if they responded incompletely, or if the filled questionnaire contained contradictory answers. Participants answered to the questions voluntarily.

Data was analyzed by SPSS version 22, while T-test and Chi-square were used to explore the intra-relation between variables. Quantitative data were calculated in forms of median and mean. Level of significance was considered less than 0.05 (P-value < 0.05).

#### RESULTS

In this cross-sectional study 377 participants of the dental specialty entrance examinations including 215 (57%) males and 162 females (43%) took part in the trial by filling out the questionnaires in the academic year of 2014-2015. Results illustrate that both the first and second Medical University of Iranian ranking (Tehran and Shahid Beheshti University of Medical Sciences) were the top priority for the participants to get their post-graduate degree. Moreover, it was seen that more than one fourth (28%) of participants were willing to do their service after finishing the course in the capital. Information about participants' cause and motivation for choosing this field of study was evaluated in six categories including the income from related jobs, academic prospect, position of this subject amongst other disciplines, family matters, the person's talent in this field, and international aspect of the subject, while the latter one had the least importance among other causes (Figure 1). Having a look at the first cause in the list of the reasons for taking the exam reveals that obtaining a specialty was the one key reason for participants to take the examination, whilst getting a degree to look

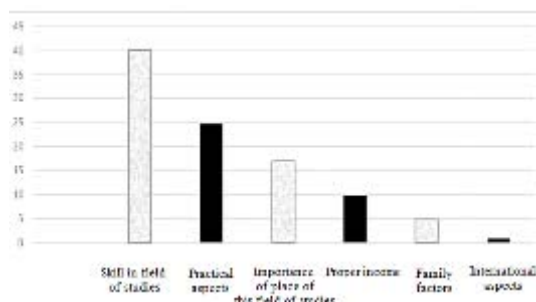
successful between family and friends and their encouragement to obtain a degree were the least important motivations for them. Furthermore, results illustrate that the top preferred specialty course in a specific dental school (SCSDS) were orthodontics in Shahid Beheshti University (10.2%), orthodontics in Tehran University (9.4%), and oral and maxillofacial surgery in Tehran University of Medical Sciences (7.6%) were respectively the most selected ones. Figure 2 illustrates the reasons why participants chose their preferred dental school.

Evaluating the list of first chosen subject shows that the most popular one was orthodontics (36.1%), on the contrary, oral health was the least favored one since only 0.8% of participants would choose it. In fact amongst first to twelfth selected subjects, orthodontics and periodontics were the two most popular ones, whereas community oral health, oral and maxillofacial pathology, and dental material were the three least favorite ones. Results also illustrate that there was not a significant relationship between sex and the reasons why participants chose different subjects ( $p=0.324$ ), whilst the Chi-square test illustrated that there was a significant relation between sex and their first choice of subject ( $P\text{-value}<0.001$ ) in a way that male participants chose orthodontics (32.9%), surgery (28%), and prosthodontics (13.7%) as the most opted course of study and pediatrics (0%) and oral disease (0.6%) as the least first chosen ones. On the other hand, female participants chose orthodontics (39.7%), pediatrics (20.1%), and oral and maxillofacial radiography (7.2%) as the most preferred branches of study, and oral health (0.55%)

and oral disease (1.5%) as the least chosen ones. Evaluating the reasons for choosing a specific dental school shows that female participants were more concerned with family situation affairs (36%), and the instructors working in that dental school (28%), while male participants were more concerned with the instructors (27%) ( $P=0.016$ ). In addition the number of admitted patients was the least important reason for both male and female participants. Evaluating the reasons why participants were eager to continue their education demonstrates that obtaining a degree for the sake of job development (44.9%), becoming an instructor (25%), and being more eligible to get married (17%) were the reasons towards which male participants were most gravitated, whereas for females specialization for the betterment of job development (45.9%), starting a family (32%), and becoming an instructor (18%) were the most important motivations. Statistical analysis proves that there was a significant relation between sex and reasons for pursuing further education ( $p=0.01$ ). Furthermore, those participants who both obtained their GP degree and inhabit metropolises were willing to pursue a specialty course in their own hometown.

## DISCUSSION

Since training dental professionals may impose high financial expenses on healthcare system, it is imperative to implement studies considering factors affecting the choice of study for medical and dental students in post-graduate courses<sup>14</sup>, for such studies can help the policy-



**Fig. 1.** Chart representing percentage of specialized dental assistant examination participants shown separately by reason of their chosen field of interest



**Fig. 2.** Chart showing percent frequency of participants of specialized dental assistant examination shown separately in terms of the first motivation behind choice of place of study in the event of admittance to the specialized field of studies

makers, managers, and faculties have a better understanding of the needs of post-graduate courses<sup>2,3</sup>. This study evaluates the motivation of people taking part in the entrance examination of dental specialty courses, and the factors affecting their choice and place of study.

Brand *et al.* evaluated the motivations affecting the choice of study in a group of Australian dental students in 1996. Based on the outcome of this study most persuasive motivation for students were serving other people, being independent, having an appropriate occupation, and having financial security. On the other hand, establishing social relations and, surprisingly, having a high social status were the two least important motivations<sup>20</sup>.

The current study demonstrates that male participants outnumber female ones. Also, Brand *et al.* suggested that male participants were two times more than females. Furthermore, since the welfare in the population in Brand study was high, the top reason for participants to take a post-graduate course was helping other people, while in Iran due to financial status participants were more concerned with having a good salary, and financial security.

Another study conducted by Hashemi *et al.* in 2001 evaluated students' interest in different post-graduate courses, the reasons why they were fascinated with those subjects, and their opinion about an increase of capacity in different dental specialty courses. This study reveals the fact that the top liked subjects were orthodontics, oral and maxillofacial surgery, endodontic, operative dentistry, pediatric dentistry, prosthodontics, periodontics, oral and maxillofacial pathology, oral medicine, and radiology, while 53.4% were in favor of an increase in the capacity. Comparing the current study with Hashemi study sheds light on the fact that orthodontics is still the most popular subject after more than one decade. Also in Hashemi study obtaining a higher degree was the most important motivation, whereas in the current study acquiring expertise was reported as the main cause.

Moreover, Albitar *et al.* evaluated the reasons why participants chose different subject as their favorite specialty among 604 Arab dental students in Jordan, 2008. Results show that the two most important reasons amongst both males

and females were having a high social status (44%) and helping other people (43.3%)<sup>18</sup>.

Hawley *et al.* conducted a survey evaluating the reasons of students' interest for taking a post-graduate course, their perception of the admission procedure in dental schools, and their expectations of their opted dental specialty course in 2008. Results illustrate that almost half of students (47.8%) were eager to continue their education in general dentistry specialty, while 16.4% wished to be an orthodontics specialist. Besides, a vast majority (72.8%) had a positive opinion towards the admission procedure. It was concluded that the dental specialty association needs to take better steps to attract students due to an increase in the number of applicants<sup>21</sup>. It is worth mentioning that general dentistry specialty, the most popular post-graduate course in the US based on the results of Hawley's study, does not exist in Iran, while in medical schools general medical practitioners may take a one year course and become a family doctor.

Sujal *et al.* performed a study in India in 2013 which examined students' motivation for taking a post-graduate course, their perception of the admission procedure in dental schools, and their expectations of their chosen dental specialty course. Almost half of students (49.4%) forecasted a bright future for themselves, and 45% chose to study a post-graduate course because a dental specialist is not expected to stay at night shifts, and also does not perform emergency checkups. Also, it was revealed that majority of applicants chose Ahmad Abad University for its reputation<sup>22</sup>. In accordance with the result of the aforementioned study, in the current study it was proved that the reputation of a dental school has a decisive effect on students' choices since Tehran University and Shahid Beheshti University, both located in the capital, were the two most selected ones amongst others. On the other hand the result of the current study shows that skill development was participants' main motivation to take a dental specialty course, whereas, Sujal reported that being exempted from night shifts was the most essential motivation for the applicants. Moreover, the current study demonstrates that the main reason why participants were eager to continue with their education was the need for specialization for development; whereas in Sujal study most

applicants would pursue their academic career for personal reasons, and others (44%) reported family and friends' motivations, and other factors as their top reason. Also in Hawley study having a dentist as a family member was the most effective reason for an applicant to take a post-graduate course in dentistry, on the contrary, this cause was the least important one in the current study. Also, this study proves that orthodontics subject, Tehran city, and SCSDS orthodontics/Tehran University and orthodontics/Shahid Beheshti University were the most popular ones in the country, and if an applicant was not accepted in one of these two SCSDSs, they would choose to study orthodontics in another city.

Results of the current study proves that due to the continuing development of the social life the health service experts including dentists are required to act in responsible way in order to escalate the well-being of the society. Also, political, economic, and social changes can affect the health system since such fluctuations hugely affect the work force in this realm. Detailed and forward-looking plans may reduce such negative phenomenon, and increase the total health of the community.

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