

## The Comparison of Iranian and Foreign Students' Motivations to Choose Dentistry Field of Study

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### **Abstract**

#### **Background**

Because of some special and privileged attractions of dentistry discipline, the first choice of volunteers who want to enter university is dentistry. The students usually choose it regardless to their interests and talents. Therefore, this study aimed to investigate Iranian and Foreign student's motivations to choose dentistry field of study.

#### **Materials and Methods**

We searched international databases such as PubMed, Scopus, EMBASE, Cochrane Library, and Iranian databases such as SID, Magiran, Iranmedex using a searching strategy during 2000 to 2015 years. Database without language restriction, since 2000 sources, with the MeSH term "Choose dentistry field" AND "Students". At first, in the initial search, 152 articles were found, and finally, 51 of them which were related to the subject of this research were used.

#### **Results**

In general, the motivation of students to choose field of study in Iranian and Foreign students include the following: an independent office or job independence, high economic income, appropriate social status, job attractiveness of dentistry, appropriate job position, individual longing, help others, top rank of student in the university entrance exam, continue to study at specialized PhD in one of dentistry trends, successful marriage and interest in the field of dentistry.

#### **Conclusion**

It seems that with regard to the high unemployment rate of university graduates in Iran, the most important incentives of applicants who want to enter the dentistry discipline are high income and particular social prestige at this major. Moreover, high income and independent job situations are the most important factors in Foreign students for choosing this field of study in the overseas studies.

**Key Words:** Dentistry field, Motivations, Students, University.

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## 1- INTRODUCTION

Everyone has experienced selection in his life. The choosing moments are key moments; because an individual makes his fate by making decisions about a method or a specific phenomenon. With a right choice one can utilize the resources (material, financial, human and informational) in an appropriate manner and prevents the waste of resources. Choosing a field of study is also important; because, a wrong choice causes a decrease in a country's scientific level, waste of human and economic resources, incuriosity and lack of student motivation toward social issues and mental disorders in the student's personal and social life. The career choice is a multifaceted and complex process that affects all spheres of life, and is one of the most important decisions throughout a person's life. Everyone tries to choose a career in the community that in addition to supply his material needs, it could satisfy him/her psychologically (1).

In the past, the majority of students were turning to the dental profession with an idealistic vision; while with change in societies, the young generation's attitude in choosing a career has changed and the inclusion criteria to the discipline to a large extent has been affected by social and economic factors (2-5), but with respect to the fact that due to the long period of education and high costs career change is rarely possible for dentists and those who for whatever reason are not suitable for the profession, suffer from it (6). According to Chambers' report, 20-50 percent of dentists would not choose the dental profession in the event of further chance for choosing a job (7).

In recent decades more attention has been paid to the critical role of dentistry and medical disciplines in protecting and promoting the health of all classes of people in different societies. Additionally,

political, social and economic changes have had a positive impact on the promotion of health care workers' position in the community (8). Studies have shown that dental students, because of lack of concern for employment after graduation, are in better mental state compared to other students (9). Studies have also shown that there is a relationship between academic achievement and mental health (10). The previous studies have shown that in addition to various incentives for entrance of students to dentistry, there are some differences in student incentives considering underlying factors such as gender, race and educational level of parents (11). According to study findings in Brazil which has the largest number of dentistry graduates in the world, it was found that the causes and motivation of the students in choosing the discipline is not fixed and has been influenced by environmental and internal factors (12-14). One of the significant aspects of Iran's ancient civilization is pay due attention to the medical knowledge the turning point of which is establishment and development of Academy of Gondishapur (GS) in Khuzestan province of Iran in 1745 (271 AD) (15).

The development in countries' medical education system is one of the main policies of the Ministry of Health and Medical Education of the Islamic Republic of Iran. Therefore, paying attention to innate incentives of the system is proposed along with other existing developments. Choosing the educational course and job are among the behaviors that are performed with regard to the motivations, that their transposition is not the same for all and even between males and females; on the other hand in order to provide appropriate platform and background for employment in appropriate jobs, studying and investigating individual's characteristics, talents and desires seem to be necessary. (16). In Iran, because of

some special and privileged attractions of dentistry discipline, the first choice of volunteers who want to enter university is dentistry. They usually choose it regardless to their interests and talents. Therefore, the aim of this study was to investigate the motivations of Iranian students to choose dentistry field of study.

## 2- MATERIALS AND METHODS

Iran Medex, Magiran, Iran Journal, SID, PubMed / Medline, Google Scholar, Scopus and ISI Web of Knowledge databases were searched thoroughly to find the articles published from 2000 to 2015 years. In the search performing, the articles with no restriction on the language of publications were explored while the Mesh Term of "choose dentistry field " AND "Students" were selected.

In the initial search, 152 articles were found, that in consultation with the experts of medical and dental education, 51 of them which were related to the subject of this research were used.

## 3- RESULTS

51 articles were found with " choose dentistry field ". Stratification of these types of articles was as follows: 29 were original articles, 14 were of the Iranian , 15 major research conducted outside of Iran study at different countries including United States, England, Ireland, Sweden, Japan, China, Brazil, India, Yemen, and Syria (**Table.1**).

In general, the motivation of students to choose field of study can be summarized in 12-item includes: an independent office or job independence, high economic income, appropriate social status, job attractiveness of dentistry, appropriate job position, individual longing, help others, top rank of student in the university entrance exam, continue to study at specialized PhD in one of dentistry trends,

successful marriage, interest in the field of dentistry, and others recommend.

### 3-1-Iranian articles

In Iran 14 major researches have been carried out regarding the investigation of dentistry students' main incentives concerned with discipline choice in medical universities of the country during 2000 to 2015 years.

1. The results on Ravaghi et al. among first – year dental students of Tehran and Shahid Beheshti University, showed that over 60 percent of students were females. Most important motives for choosing dentistry were social status and service to people whereas manual working was a less important motive. Statistically significant differences were revealed in two areas of career choice motivation between male and female dental students. Male students were more likely to be motivated by income. By contrast female students were more likely to be influenced by their parents' advice. Having a good status in the society, students were choosing dentistry to gain social status, service to people was a strong motive. Male graduated students' rate income showed more highly than the females. Male students could be encourages by this point to enter dental profession (17).

2. A cross-sectional study of a group of 219 out of 225 (response rate: 97 percent) final-year dental students in four accredited dental schools in Tehran was conducted using a self-administered, structured questionnaire. The most popular reasons for these students' choice of dentistry as a career were a general interest in medicine and desire to enter a prestigious profession with high social status. The majority of the students planned to enter private practice; fewer intended to pursue specialty education abroad. Most of the female students planned to work in a group practice environment such as a clinic rather than a

solo practice. Single students showed greater enthusiasm than married ones for pursuing further studies abroad after graduation. Overall, these dental students appeared to have positive attitudes about the dental professions (18).

**3.** A cross-sectional questionnaire-based survey undertook involving first-year dental students who enrolled at Shahid Sadoughi University (SSU) of Medical Sciences and Health Services and Tehran University of Medical Sciences (TUMS) in 2012. The questionnaire included demographic and individuals, environmental and professional motivations of the students. Participation rate was 40% for SSU and 79% for TUMS. SSU students reported continual desire, in individual domain, main university entering exam, in environmental domain and possibilities for postgraduate education and having own clinic in the professional domain. However, TUMS students were more influenced by continual desire, personal interest and family recommendation, income and possibility to have their own clinic. It seems that the most important factors to dentistry by SSU and TUMS first-year dental students were environment and professional factors. The significant effect of professional factors suggests that by improving these factors, the motivation of interested students may increase (19).

**4.** Seventy five dental students at first-year (40 students), and sixth grades (35 students) from Mashhad dental school participated in this cross sectional study. A self administered questionnaire consisting of students' personal information and their motivations for choosing dentistry were distributed among the students. The results show that the most frequent reasons for choosing dentistry were economic factors, social status and job security, and proper and flexible working time. Females, attention due to the lower risk for life-threatening

complications in dental practice were significantly higher than males ( $P < 0.05$ ). Shifting perspectives of sixth year dental students toward dentistry compared to first-year students were more frequent ( $P < 0.05$ ). This change in perspective in the sixth-year students had a more negative trend. Economical factors and professional factors had the most influence on selecting dentistry by students. It is definite that these kinds of factors in dentistry could have negative effects on dental graduates, future careers (20).

**5.** Also, in a study conducted by Amani et al. in 2012, interest in the dentistry discipline and serving the people were the most important incentives for choosing the discipline by students of Ardebil University of Medical Sciences (21). This descriptive study was performed nationwide on dental students who had participated in Student Congress using random sampling. The questionnaire had 22 questions and was distributed among a random sample of 325 students. A total of 283 students (112 males, 171 females) with a mean age of  $22.3 \pm 2.04$  completed the questionnaire. Based on the mean scores, factors such as socially decent career (4.92), job security (4.84) and a high-paying job (4.84), were the main reasons for choosing dentistry. This is while considering dentistry as an opportunity for research (2.61) and having information or background about dentistry (2.65) were the least important factors. Investigating aspects affecting dentistry choice between the two genders, only being keen on the scientific aspect of dentistry was significantly higher in female students than males ( $P = 0.039$ ). In students' opinion, acceptable social position, ensured future of the work and proper income were the most important factors in choosing dentistry. Also regarding the most important factors in choosing dentistry, there was not any

significant difference between two genders. Due to the high cost of education and the requirements for providing a high quality of health care, it seems that more attention is required toward the cultural superiorities and cognitive abilities necessary for the students to choose their study courses (22)

**6.** Bourzgui et al. in a study involving 752 dental students from the only two Moroccan dental schools was conducted between April and May 2011. The students were asked to rank the career choices' set of questions on a five point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Results of Bourzgui et al. in a cross sectional study involving 752 dental students from the only two Moroccan dental schools, indicate that dentistry has a noble function; the "desire to help people" and "job opportunities" determines career choice among Moroccan dental students. Also, men were motivated by working conditions factors ( $P < 0.05$ ) while women were motivated by human factors ( $P < 0.05$ ) (23).

**7.** All first and second year dentistry students from Kerman School of Dentistry ( $n=52$ ) participated in the descriptive study. Results showed that the most important motivation for choosing dentistry was "relationship with people", whereas manual working was the least important motive. Male students were more likely to be motivated by income while female students were more likely to be influenced by their parents' advice. Since, income is an important factor for male students compared to females, this factor can be used for encouraging male students to choose dentistry as their profession (24).

**8.** In a study carried out by Kazemi et al. in 2011, having a high professional status, social status, job security and high income were the most important incentives for choosing this discipline by students of

Rafsanjan University of Medical Sciences (25).

**9.** In Rejati-Haghi's study in 2006, financial incentives were the main motives for choosing the discipline by students of Tabriz University of Medical Sciences (26).

**10.** Hamedirad et al. at a descriptive cross-sectional study consisted of 104 first-year dental and medical students in the University in 2012–2013. Results showed that 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. 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 (27).

**11.** Gilavand et al. at a cross-sectional descriptive and analytic study that performed on 264 students of professional MD (medial doctorate) of dentistry in Ahvaz Jundishapur university of medical sciences in 2015; results showed that having an independent office, earning high economic income and appropriate social status were the most important motivations

for choosing this field of study among the students (28).

**12.** In Gilavand et al study in 2015 having an independent, a proper social position, and a high economic income were respectively the most important incentives in Ahvaz Jundishapur University of Medical Sciences (tuition-paid students) to choose their field of study (29). The participants were all 220 students of the Autonomous College of Dentistry who were accepted through the nationwide university entrance examination and who have to pay a relatively high tuition (29).

**13.** Vahid Dastjerdi et al. aimed to compare the study motives and career choices of senior undergraduate medical and dental students in Iran. So, in a cross-sectional questionnaire-based survey study involving final year medical and dental students from 4 dental and medical schools was conducted. The factor analysis identified six motivational items: "Social and professional status", "Health care and people", "Others' recommendation", "personal interest and nature of occupation", "Occupational experience" and "Personal life". Medical students were more influenced by playing a role in community health and Personal interest. Work independence and Social factors however were two major influential factors among dental students. Engaging in postgraduate studies was the first career preference among 90.9% and 89.8% of dental and medical students respectively. Medical and dental students report a wide range of motivational factors in studying medicine/dentistry and future career plans which is affected by age, parents' education and marital status (30).

### **3-2-Outside of Iran articles**

In this study, 15 major research conducted outside of Iran was analyzed, considering main motivations of dentistry students in choosing field of study at different countries including United States of

America, England, Ireland, Sweden, Japan, China, Brazil, India, Yemen, Syria, and Turkey as shown in (**Table.1**), in the end of this paper. Their motivations were compared with motivation of Iranian students (31-45).

**1.** An observational, descriptive, cross-sectional study by Du Toit et al., was conducted on a cohort of first-year dental students from thirteen countries on six continents in 2011-2012 (n=711). Participants completed the Du Toit Questionnaire for Health Workers and Students, designed for this study, to disclose the reason(s) why they chose a career in dentistry. The response rate was 89.1 percent; and their gender was 54 percent female and 46 percent male. The motive selected by the highest percentage (37.4%) was "Dentists have enough time off for family life". The second most popular motive at 36.3% was "I want to be a dentist who helps poor and underprivileged people". A strong relationship was found between this altruistic motive and students' having been accepted into their program by means of a personal interview or motivational essay as one of the admissions criteria ( $P<0.05$ ,  $r=0.89$ ). This study found that the two strongest motivations for these students from around the world to seek a dental career were the flexible work schedule, leaving time for family life, and the opportunity to help those less fortunate (31).

**2.** Xu Yan et al., in a study, compared career choice and future plans of dental students in China and Japan. Significant differences were detected for eight items between the two countries. Regarding motivation towards career choice, 41% of Japanese students indicated positive motives related to helping others, achieving self-worth and health-care related interests, whereas Chinese students indicated that their choice was mainly for financial and prestige reasons, and for 32%

of them, dentistry was a passive choice. More Chinese dental students (74%) wanted further education compared with Japanese students (22%). The majority of Japanese students (56.9%) planned to work as general dentists. Conversely, Chinese students were more likely to be a specialist (50%). More than 50% of Japanese students wanted to work in dental offices, but the majority of Chinese students (65%) preferred university hospital. Results showed that nearly one-fourth of the Chinese students did not want to be a clinical dentist mainly because of the poor health-care environment (32).

**3.** Karibe et al., aimed to identify and compare the perspectives of dental students towards their career choice and dental education in Japan and Sweden. One hundred and fourteen dental students from the Nippon Dental University, Japan and 43 dental students from the Karolinska Institutet, Sweden, participated in this study. Significant differences were detected for 10 questionnaire items between the two countries. Regarding motivation towards the career choice, 44% of Swedish students indicated interpersonal motives related to helping other people, whereas 32% of Japanese students indicated expectations of their family in the dental profession. As future career options, 64% of Japanese and 47% of Swedish students planned to work as general dentists. More Swedish students (37%) preferred specialization- than Japanese students (17%). Nearly three-quarters of the Swedish students were satisfied with the teaching faculty of their school, whilst only 32% of the Japanese students indicated content. The perspectives of dental students were different in Japan and Sweden (33).

**4.** Jaiswal et al., aimed to investigate factors that lead to choice of dentistry as a profession among the first- year dental students in a South Indian State and, secondly to evaluate gender differences in

motives for pursuing a career in dentistry. Results showed that female (74%) exceeded male students (26%). Only few respondents (24%) had placed dentistry as their first career choice. Desire to work in health care (84%), unable to enter medicine (79%) and independence of work (72%) were the top three influential factors. This study revealed significant differences between males and females with respect to desire to work in health care motive. The results of this study highlighted some important influential factors in the choice of dentistry as a professional career (34).

**5.** Anbuselvan et al., at a study examined factors influencing career choice among dental college students in private dental colleges in Tamil Nadu, India. The study was conducted using descriptive survey design with a population of 989 students. Results showed that the most common reason for among the dental students to choose dental science as their career choice was self-interested followed by didn't get medicine degree, prestige and gives respect. The least common reasons observed in the study population were inspired by dentists (35).

**6.** Rashmi et al., aimed to determine the motives and perceptions of undergraduate and postgraduate dental students attending Dental Colleges in Bangalore city. Two hundred and thirty-three (38.83%) students had dentistry as a first choice. In the present study, "caring profession" (94.33%) and private practice (25.6%) were the motives for choosing dentistry. The level of agreement scores decreased from 1<sup>st</sup> year B.D.S students to post graduate students. For selecting dentistry as a career job security, caring profession, flexibility, self-employment and prestigious profession were found to be important motivating and perception factors. Majority of students indicated that dentistry was not their first choice of career (36).

7. Banabilh aimed to determine the reasons why undergraduate Yemeni dental students who attended the University of Science and Technology (UST) chose dentistry as a career. A total of 300 out of 500 responses were recorded for this study, a response rate of 60 percent. The results showed that students chose dentistry as a career for the following reasons: economic (easy to find jobs, 44.7 percent); vocational (I like to treat people to improve their health, 39.0 percent); personal (my family dentist's encouragement, 37.3 percent); and professional (I can work in many fields, 33.0 percent). When group and item scores were compared between genders, statistically significant differences were only found for vocational reasons ( $P < 0.05$ ). In conclusion, the reasons Yemeni dental students chose dentistry as a profession were primarily economic, then vocational. However, vocational reasons were found to be the significant factors for choosing dentistry as a career by both genders in this group of UST Yemeni dental students (37).

8. Mashlah at a cross-sectional questionnaire survey assessed the motives for choosing dentist as a profession among dentistry students at Damascus University, Syrian Arab Republic. A total of 408 undergraduate students (233 males and 175 females) aged 18-23 years were selected randomly from students in the second, third and fourth years of dentistry study. The number of admissions in females had increased over the 3 years. The main motivation for choosing dentistry was as a means to achieve personal goals, including getting a good job abroad, having financial independence, and attaining a good reputation. There were significant differences between the sexes with regard to the reasons for choosing dentistry (38).

9. In study by Hallissey et al., 150 undergraduate dental students of all grades

at a University Dental School were surveyed. The overall response rate was 80.6%. About two-thirds of participants indicated dentistry was their 1st career choice, with medicine being the primary alternative. Reasons for choosing dentistry included perceived ease of employment, being self-employed, working regular hours, followed by an opportunity of good income, and the opportunity to help people. Having relatives or friends in the profession and lifelong ambition were the least important factors for this sample. Extrinsic factors relating to employment conditions had a strong positive correlation ( $P < 0.05$ ) with each other, while lifelong ambition had a strong negative correlation ( $P = 0.004$ ) with significant financial reward. No significant differences were found in most responses when analysed by gender or year in school. It is concluded that this sample of students is attracted to dentistry primarily due to a positive perception of working conditions, followed by the altruistic motivations of helping people and improving their appearance (39).

10. Crossley et al., aimed to conduct a survey which directly compared the motivation of a selection of dental and medical students at Manchester University. The questionnaire was distributed to 80 medical students and 80 dental students chosen from a random selection of lecture slots. For instance, dental students were significantly more likely to be motivated by factors relating to status and security and the nature of their occupation (eg regular working hours, self employment and independence). By contrast, medical students were significantly more likely to be motivated by factors relating to career opportunities, patient care and working with people, use of personal skills, and interest in science. Work experience was a strong motivating factor in the case of both dental and medical students (though especially for dental students).In

comparison with dental students, medical students manifested a more professional attitude in which altruism and intellectual challenge constituted central motivating factors. By contrast, dental students demonstrated more of a commitment to personal and financial gain (40).

**11.** During the 2000-2001 academic years, Scarbecz et al. conducted a survey of first-year dental students at a sample of publicly funded U.S. dental schools. The purpose of the survey was to assess gender differences in motives for pursuing a dental career. The data show that male dental students rate self-employment and business-related motives as more important, while female dental students rate people-oriented motives more highly. Factor analysis revealed four distinct clusters of motives for pursuing a dental career: a financial motive, a business-oriented motive, a people-oriented or caring motive, and a flexibility motive. Women scored significantly higher than men on the caring factor, whereas the reverse was true on the business factor. Male and female students rated financial and flexibility motives equally (41).

**12.** Nashleanas et al., aimed to examine the importance of debt on career decision-making while also considering the role of other influences. Responses to a self-completed questionnaire of all final (fourth) year students at the University of Iowa College of Dentistry from 2007 through 2010 were analyzed to identify the importance of educational debt and the influence of spouses, other family members, and mentoring dentists in the decision to enter private general practice immediately after graduation. 58.9% of respondents planned to immediately enter private practice after dental school. Bivariate analyses revealed women to be more likely to enter private practice than their male counterparts (69.0% vs. 51.8%,  $P=0.006$ ). Students planning to enter practice immediately did not differ

significantly from those with other career plans on the basis of marital status or having a family member in dentistry. Anticipated educational debt of at least \$100,000 was positively associated with plans to enter private practice immediately after graduation. Also, the influence of a spouse, other family members, and family dentists were also positively associated with the decision to enter private practice. These factors all maintained significance in the final multivariable model ( $P < 0.05$ ); however, educational debt of at least \$100,000 was the strongest predictor of plans to enter private practice ( $P = 0.023$ ). This project has demonstrated the significant influence of educational debt, beyond other external influences (42).

**13.** Aguiar et al., aimed to determine the factors that lead to the choice of dentistry as an occupation among dental students in Pernambuco, Brazil. A total of 1,024 students were surveyed. All participants were enrolled in dentistry courses in the state of Pernambuco in 2008. The results demonstrated that the choice of occupation was made primarily for economic reasons (73.5 percent), followed by vocational reasons (68.3 percent), professional reasons (67.8 percent), and personal reasons (56.6 percent) (43)

**14.** Ferraz dos Santos et al., at a cross-sectional study described the profile, career choice motivations, and career intentions of Brazilian dental students from three Brazilian public universities ( $N=915$ ), and evaluates factors related to these choices. Most students intended to become specialists and work in both the public and private sectors simultaneously. Female students, low-income students, and students beginning their program were more likely to work in the public and private sectors simultaneously than other types of students. This study suggests that choice of career and career plans are influenced by factors related to the

students' characteristics and their conception of the profession (44).

15. Tanalp et al., aimed to obtain information about the social and demographic profile of students enrolled in the first private Turkish dental school, to gather information regarding the reasons for their preferences, and to obtain data about their career expectations. Questionnaires were distributed to 278 students; 229 returned the survey for an overall response rate of 82 percent. Of the respondents, 65.5 percent were females and 34.5 percent were males. First degree relative (mother, father, siblings) had the greatest influence on the students in choosing dentistry as a career. Fathers and mothers had similar impact on the students' choice of dental profession (45.9 percent and 46.6 percent, respectively).

Humanistic feelings, desire to serve others, and reasonable working hours were the predominant reasons that motivated females to become a dentist ( $P < 0.05$ ). Also, academic interest and interest in a medical field were significantly influencing factors for female students ( $P < 0.05$  and  $P = 0.001$ , respectively). Also, 86 percent expressed a goal of specializing in a specific branch of dentistry; orthodontics and oral and maxillofacial surgery- was the top-ranked specialties. Although only 41 percent of the students were of Istanbul origin, 82.5 percent reported that they wish to practice in Istanbul (45).

#### 4- DISCUSSION

In fact, the incentives of both groups were related in some way with economic issues and easiness of dental profession. Regression the results of the study are compatible with Ravaghi et al.(17), Baharvand et al.(18), Aghili et al.(19), Nematollahi et al.(20), Memarpour et al.(22) Bourzgui et al. (23), Rejati-Haghi et al.(26), Hamedirad et al. (27), Gilavand

et al.(28-29),Vahid Dastjerdi et al.(30) in which the material incentives are important factor on choosing dentistry discipline by the Iranian dental students . Thede results also in line with Rashmi et al. in India(36), Banabilh in Yemen(37), Mashlah in Syrian(38), Hallissey et al. in Ireland(39), Scarbecz et al. in USA(41), Nashleanas et al. in USA (42), Aguiar et al. (43), and Ferraz dos Santos et al.(44), who consider economic reasons as the most important incentives for choosing dentistry discipline among students. These findings also compatible with the Gallagher et al. findings (2) which point out the impact of material benefits of dentistry, specialized in the dental profession, job security, flexibility, independency and a good quality of life on discipline choice of dental seniors in British Royal College. In this regard Crossley et al. (40) investigated the incentives for choosing dentistry and medicine discipline among students of Manchester University. In this study, a questionnaire was used with six factors including job- security and position, job nature, job opportunities, patient care and working with people, use of personal skills and interest in science learning. The results showed that dentistry students pointed out personal interest and material benefits as motivation as incentives for choosing dentistry discipline.

It seems that today, Iranian women are more willing than ever to have a job and an independent income and this causes a significant number of female students with good rating at the state university entrance exam prefer dentistry to other disciplines due to the benefits associated with professional nature of it. In recent years we have witnessed that the number of male dental students has had more growth compared with females. This is consistent with the findings of different researchers in Denmark (12), Australia (47), America (41), France (48), Britain (33) that had studied gender role in tendency toward dentistry discipline and concluded that

females' toward choosing the dental profession is growing. Undoubtedly, many of young people in the country, in order to be able to find a better job in the future or to increase the likelihood of their employment, enter universities to carry on their education. Therefore, with regard to the issue of job security and with the view that people with employment in the dental profession would not be worried about unemployment or losing their job, choose the dentistry as their future academic discipline. So, it seems that with regard to the high unemployment rate of university graduates and the limitations necessary to state employment and other organizations in the country, the attention of applicants willing to study in dentistry discipline as a means to make a reliable and independent income along with specific social prestige of it have been increased. In this regard, Gilavand et al., in a research conducted in 2015 entitled investigation and comparison of depression and anxiety among native and non-native dentistry students of Ahvaz Jundishapur University of Medical Sciences (AJUMS), have reported students' depression and anxiety as to be normal and have found it one of the reasons for dental students' lack of concern for employment after graduation(9).

On the contrary, there are also some studies which in their results the role of material factors and incentives and money making as important factors in choosing dentistry discipline is inconspicuous (11,19,21,23,24,31-35,40,41,50). Vigild et al. proposed income factor as influential factors in choosing dentistry after factors such as easiness of job, social dignity and respect and theoretic nature and practicality of dentistry (12). Also, in a study conducted by Amani et al. in 2012, interest in dentistry discipline and serving the people were the most important incentives of students in Ardabil University of Medical Sciences (21). Hashemipour in a research carried out in

Kerman also concluded that communication with the people, serving the community and the social status have been the most effective factors in choosing dentistry discipline by dental students(24). The findings of the study conducted by Morriss confirmed that the most important incentives of dental freshmen of Britain in choosing dentistry discipline included serving the community and people, but earning an adequate income was the sixth priority of students (51). In this regard, the results of a study carried out by Karibe et al. showed that the reasons for choosing dentistry by the majority of Swedish students are respectively serving the public (44%), earning money (26%) and interest (21%) and among Japanese students they are serving the people (18%), earning money (11%) and interest (9%) respectively that it shows that the Swedish students' incentive to become a dentist and learn dentistry academically is higher than Japanese students(33).

The results of numerous studies indicate that the reasons for choosing dentistry as a field of study based on the priorities is partly different in various studies that it can be attributed to public culture, economic issues, value of science and gaining knowledge in different societies (24). However, the similarities between the results of researches in this regard could also be due to the fixed nature of the dental profession around the world and popularity of this discipline despite numerous problems facing it.

It is concluded from the information about job status of subjects' fathers that 25.7 percent of student's fathers were physician or were employed in one of the medical-related professions which had the highest job percentage among the students' father's job. This could be a basis for choosing dentistry discipline in their children. Karibe et al. (33) in a study among dental students in Japan found that 60 percent of Japanese students who were studying in a

nongovernmental dental school, at least one of their parents were dentist. In our study population, free (28.6%) and employee jobs were in the second and third order of student's father's job.

## 5- CONCLUSIONS

Although today dentistry is the first choice of many applicants who want to enter universities in Iran, indiscriminate admission of students in dentistry discipline and excessive desire of students and their families (who played a significant role in choosing this field of study) to it has excessively increased the tendency toward this field of study that itself has beclouded the future prospects of the discipline due to reducing the possibility of occupational mobility and social benefits and the labor market and it seems that in the coming years, the least job opportunities will no longer exist in the big cities for graduates of this field of study. The medical education system of each country, because of the need, relentlessly continues to educate student and does not wait for creation of motivation and desire in students.

These are educational systems that must increase their efforts, in addition to maintain the status quo, improve the learning environment and emphasize on the related components namely learner, teacher, educational and welfare facilities, and the provision of appropriate training programs and by creating harmony between the theory and practical lessons send students towards work environment with greater readiness and incentive and deliver wise and skilled workforce to community. Undoubtedly, with respect to the horizon of twenty years program of Iran and software movement, any investment in this regard appears necessary.

In later researches, for obtaining more accurate results, it is necessary to identify students' incentives for discipline choice

and expand the range of assumptions before entering the university; because this issue and such human subjects are one of those issues that are not dependent on and limited to one or more variables. The role of variables such as parental expectations, their educational style, class and school atmosphere, attitudes and religious beliefs, the effect of different feedbacks, thinking styles, study habits, perfectionism, perceptions of competence and autonomy should also be considered in this process.

**6- CONFLICT OF INTEREST:** None.

## 7- ACKNOWLEDGMENTS

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**Table 1:** Motivations of students to choose dentistry field of study

Title	Authors (Year)	Country and city studied	Motivations of students to choose dentistry field of study	Article Design
The motivation of dental students to enter the dental school	Ravaghi et al. (2003)	Iran –Tehran <i>city</i>	Job income, social status, job security and decent working time	Research article
Attitudes of Iranian dental students towards their future careers: an exploratory study	Baharvand et al. (2013)	Iran- Tehran <i>city</i>	Private practice, prestigious profession with high social status.	Research article
The main influencing motives for major university choices among firstyear dental students of Shahid Sadoughi University of Medical Sciences and Tehran University of Medical Sciences	Aghili et al. (2014)	Iran -Tehran and Yazd <i>city</i>	Tehran: individual's continual desire, reputation of Dentistry profession among people and economic income were the most important incentives for dentistry students' Yazd: a person's continual desire, a high rank in university entrance exam and having an independent clinic	Research article
Evaluation of Mashhad Dental School Students' Motives and Viewpoints on Their Career Choices in 2010	Nematollahi et al. (2014)	Iran –Mashhad <i>city</i>	High income, social status, job security and decent working time of dental profession	Research article
The motivation of dental students to enter the dental school Ardabil University of Medical Sciences	Amani et al. (2012)	Iran –Ardebil <i>city</i>	Interest in the dentistry discipline and serving the people	Research article
Factors Influencing Dental Students' Choice of Discipline	Memarpour et al. (2013)	Iran	Social respectable employment, reliable career prospect and high income	Research article
Motivational factors influencing career choices of Moroccan dental students	Bourzgui et al. (2014)	Iran	Desire to help people" and "job opportunities	Research article
Dental students' motivation for entering dentistry in Kerman school of dentistry	Hashemipour et al. (2005)	Iran –Kerman <i>city</i>	The communication with people, serve the community, appropriate social status, family recommendation and economic income	Research article

Evaluation of Motivations for Choosing Field of Study Among Medical and Dental Students of Rafsanjan University of Medical Sciences	Kazemi et al. (2011)	Iran –Rafsanjan <i>city</i>	High professional status, social status, job security and high income	Research article
Evaluation of dental students motivation in their chosen field of study	Rejati-Haghi. (2006)	Iran –Tabriz <i>city</i>	Financial incentives	Research article
Motivations for Choosing Field of Study among Medical and Dental Students of Tabriz University of Medical Sciences, Tabriz, Iran	Hamedirad et al. (2014)	Iran –Tabriz <i>city</i>	Social statusand interesting in the field, family recommendationand contact with community members, high income and Serving the community	Research article
Evaluation of Dental Students’ Motives and Viewpoints on their Career Choice in Ahvaz	Gilavand et al. (2015)	Iran,Ahvaz <i>city</i> ( free tuition students)	Independent work condition, income and social position	Research article
The Incentives of Dental School Students of the Autonomous Campus of Ahvaz Jundishapur University of Medical Science for Choosing their Field of Study in2015	Gilavand et al. (2016)	Iran,Ahvaz <i>city</i> (tuition-paid students)	Independent work condition, income and social position	Research article
Study Motives and Career Choices of Iranian Medical and Dental Students	Vahid Dastjerdi et al. (2012)	Iran	Work independence and Social factors	Research article
Dental students' motivations for their career choice: an international investigative report	Du Toit et al. (2012)	6 different countries	Time off for family life, helping to poor and underprivileged people	Research article
Career choice and future design of dental students in China and Japan	Yan et al. (2014)	Japanese and Chain	Japeneases: Helping to others, achieving self-worth and health-care. Chinese students: Financial and prestige reasons and further education to work in university hospitals	Research article
Career choice and attitudes towards dental education amongst dental students in Japan and Sweden	Karibe et al. (2009)	Japanese and Swedish	Helping to other people, expectations of their family	Research article
Why dentistry? A cross-sectional study of budding dentists in Andhra Pradesh". International Journal of Scientific Study	Jaiswal AK et al. (2014)	India	Desire to work in the health care, inability to enter to medicine filed and independence of working space	Research article
A study among dental students regarding the factors influenced dental students to choose dentistry as career	Anbuselvan et al. (2013)	India	Self-interesting, Social prestige and study population	Research article
Dentistry as a career: Motives and perception of dental students attending Dental Colleges in Bengaluru city	Rashmi et al. (2014)	India - Bengaluru <i>city</i>	Caring profession, private practice, Influence, profession, flexibility, remuneration, and versatility	Research article

Dentistry Field Study: Iranian Students vs. Foreign Students

Career decisions of undergraduate dental students at the University of Science and Technology	Banabilh (2013)	Yemen	Economic factors, vocational, personal encouragement and professional factors	Research article
Dentistry students' reasons for choosing dentistry as a career in Damascus University	Mashlah. (2012)	Syrian Arab Republic	Personal goals, job vacancies, financial independence, and attaining a good reputation	Research article
Reasons for choosing dentistry as a career-A survey of dental students attending a dental school in Ireland during 1998-99	Hallissey et al. (2000)	Ireland	Having an independent clinic, appropriate economic income and dentists' proper social status	Research article
A comparative investigation of dental and medical students' motivation towards career choice	Crossley et al. (2002)	England	Regular working hours, self employment and independence	Research article
Gender differences in first-year dental student's motivation to attend dental school	Scarbecz et al. (2002)	USA	Self-employment and business-related motives	Research article
Career influences among final year dental students who plan to enter private practice	Nashleanas et al. (2014)	USA Iowa city	Planned to immediately enter private practice after dental school	Research article
Factors involved in the choice of dentistry as an occupation by pernambuco dental students in Brazil	Aguiar et al. (2009)	Brazil	Economic reasons, vocational reasons, professional reasons and personal reasons	Research article
Intentions and Motivations Towards Their Professional Career	Ferraz dos Santos et al. (2013)	Brazil	Working in both the public and private sectors, income and job security	Research article
Demographic profile and future expectations of students enrolled in a Turkish private dental school	Tanalp et al. (2012)	Turkish	Family encouragement, Humanistic feelings, desire to serve others, and reasonable working hours and interest in a medical field	Research article