

Original Article

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investigation of Kermanshah Dental School Students' Attitude to Their Discipline and Future Career

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Abstract

Background & Objective: The provision of dental services to society members depends on the motivations of future dentists or studying students to enter this discipline and career. The present study aimed to evaluate Kermanshah dental students' attitude toward and satisfaction with their discipline and future career.**Materials and Methods:** This descriptive, cross-sectional study was performed on 223 matriculated and international students in the Dentistry School of Kermanshah University of Medical Sciences during 2016-2017. The subjects were selected by convenience sampling, and the standard questionnaire (encompassing nine items on satisfaction with discipline and six items on future career) was distributed among the students. Moreover, data analysis was performed using descriptive and inferential statistics.**Results:** In total, 223 questionnaires (76.9%) were completed by the students, 79.5% of them were satisfied with their chosen discipline. Furthermore, the high income level of the dental career was the main reason for selecting this discipline by 72.2% of the participants. On the other hand, 84.8% of the students believed that increased admission of students in this field would endanger their future career. However, the results were indicative of no significant difference between age, gender, and year and type of admission with the mean score of students' attitude toward their discipline and future career ($P > 0.05$).**Conclusion:** According to the results of the study, most dental students were satisfied with their discipline. In addition, a high level of income, interest in the discipline and gaining a high social position were among the most important reasons for selecting this discipline.

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Introduction

Today, the study of attitude has a special place in research as one of the most prominent concepts of social psychology (1). In general, attitude is defined as a combination of knowledge, feelings and readiness to respond to certain issues (2). Success in any task and achievement of a goal requires a positive attitude toward that action or goal. Success in a job and reaching a specific goal requires a positive attitude toward that act or purpose. Job motivation is an essential part of an efficient occupation, and there is a direct relationship between positive attitude and career success in the future (3). On the other hand, lack of interest in the job results in tediousness and leave of work (3, 4). In a research in Isfahan in 2004, the majority of medical students had a negative attitude toward their future career (4). In another

study in Hamedan in 2009, environmental health students had a positive attitude toward their discipline (3). Moreover, in a study on medical students in Jahrom University, most participants were concerned with their future career, declaring that they would choose a discipline other than medicine if they took the university entrance exam one more time (5). Worrying about future career is a global issue. In 1993 in England, most general practitioners were not completely sure of their future careers (6). In a research in France, 60% of medical students believed that there is an excessive number of the medical workforce in the community (7).

The most important role of dentists in the community is improving the quality of dental care and providing health services to the public. However, the method of provision of dental services to community

members depends on the motivations of prospective dentists or current students to enter the field and occupation (8). Future career success of dentists depends on their interest in their profession, and a lack of passionate selection of the field will cause problems in the career success of these individuals (9, 10). Studies on dental students have indicted a positive attitude toward their discipline. Nevertheless, most studies in this field have assessed the reasons for selecting this field by students, and concern about future career among these people has been overlooked (11-15). According to studies, there are various reasons for choosing a dental profession in different societies, including achieving social credit, providing service to community members, having a proper income level, attaining professional independence, economic security, the ability to adjust the work time, interest in the field of dentistry, hand skills and communication with people (16).

Previous studies in Iran show that most students choose a dental profession because of the social credit, high social status, and having a private occupation in the field of dentistry (17-19). It is notable that no research has been conducted in Iran to compare the attitudes of students with different conditions of university admission (normal entry and international). Therefore, the present study was an innovative research in this field. Given the varying university admission conditions of international students and differences with national universities, it is believed that students would have different attitudes toward their future career and discipline. Since it is necessary to make constructive changes in the information about the status and attitude of different students towards their discipline, the present study aimed to evaluate Kermanshah dental students' attitude toward and satisfaction with their discipline and future career in 2016-2017. In the current research, another objective was comparing the attitude and satisfaction level of students considering their university admission conditions.

Materials and Methods

This descriptive, cross-sectional research was performed on 223 matriculated and international dental students in Kermanshah University of Medical Sciences, Kermanshah, Iran in the academic year of 2016-2017. The sample size was determined using the results of previous studies. In a research by Hedayati et al. (20), the standard deviation of the variable of students' attitude toward their discipline was equal to 4.46. In the present study, the minimum sample size was estimated at 213 considering $\alpha=0.05$ and $d=0.06$ (precision). The information of matriculated and international students of the school related to the period of 2011-2016 was collected from the education department of the university, which included 290 current students of the university (180 matriculated and 110 international students) who entered the university in various years. In total, 223 participants were assessed after sampling by simple or convenience sampling and filling questionnaires by dental students. At first, the research objectives were explained to the participants in detail, and a questionnaire designed by Hedayati et al. (20) was applied which included 15 items and involved two sections on satisfaction with discipline and future career. Notably, the reliability and validity of the mentioned tool were formerly approved in the study by Hedayati et al. ($\alpha=0.73$) (20). The first part of the instrument encompassed nine items of satisfaction with discipline, whereas the second part of the tool included six items on future career. It is worth noting that the questionnaire was scored based on a five-point Likert scale, from completely disagree to completely agree.

Data analysis was performed in SPSS (SPSS Inc., IL, USA) version 18 using descriptive (central tendency and dispersion criteria) and inferential (Kolmogorov-Smirnov test) statistics (to evaluate the normal distribution of data). Given the normal variables in the questionnaire ($P>0.05$), the independent t-test and ANOVA were exploited to compare two groups and more than two groups, respectively. In addition, pair comparisons were carried out applying the Tukey's

Post Hoc Test. Moreover, the Spearman's correlation coefficient was used to evaluate the relationship between age ($P=0.04$) and scores related to the questionnaire due to lack of normal distribution. It should be pointed out that the level of significance was considered to be 0.05. Before the study, the research methodology was approved by Kermanshah University of Medical Sciences (code of ethics: Ir.kums.rec.1396.426). Moreover, the questionnaires were field anonymously and the participants were ensured of the confidentiality terms regarding their personal information.

Results

In total, 290 questionnaires were distributed among students, 223 of which (76.9%) were completed and returned. In the present study, there were 108 male participants (48.4%) and 115 female subjects (51.6%). In addition, there were 143 matriculated (64.1%) and 80 international (35.9%) students, and the mean age of the participants was 23.2 ± 3.3 years. Table 1 shows the distribution of absolute and relative frequency of selecting the items in the questionnaire of the attitude of Kermanshah dental students toward their discipline. In addition, Table 2 shows the absolute and relative frequency of selecting the items in the questionnaire of the attitude of Kermanshah dental students to future career. According to the results, 84.8% of the students believed that increased student admission in this field endangers their future career. The mean and standard deviation of the score of students' attitudes toward their discipline was estimated at 32.94 ± 4.70 , which was higher than the theoretical mean of the questionnaire's score (27). However, no significant difference was observed between matriculated female and male students in terms of the score of students' attitudes toward their discipline ($P=0.493$). On the other hand, there was a significant difference between international female and male students regarding the score of students' attitudes to their discipline ($P=0.031$). In this regard, the mean scores of male and female students were

estimated at 34.44 ± 6.12 and 31.76 ± 3.95 , respectively. In addition, there was a significant difference between all female and male students in terms of the score of students' attitudes toward their discipline ($P=0.045$). Moreover, a significant difference was found between international male and female students regarding the score of students' attitudes toward the future career ($P=0.038$). Nonetheless, no significant difference was observed between various university admission methods in terms of students' attitudes toward their discipline ($P=0.548$). Similar results were obtained regarding the mentioned variable and students' attitudes toward their future career ($P=0.405$). Furthermore, no significant relationship was observed between the score of students' attitude toward their discipline ($P=0.162$, $P=0.1$, Spearman's correlation coefficient) and the score of students' attitude toward future career ($P=0.571$, $P=0.041$, Spearman's correlation coefficient) and age (Table 3).

Table 4 shows the comparison of the score of students' attitudes toward their discipline between various admission years and based on the type of admission. In this regard, there was a significant difference in the mean score of students' attitudes toward their discipline among matriculated students in various admission years ($P=0.008$). In this respect, the matriculated students in the academic year of 2011 had the highest mean, whereas the matriculated students in the academic years of 2014 and 2015 had the lowest mean. In addition, the mean score of the questionnaire related to future career was 20.65 ± 3.2 , which was higher than its theoretical mean (18). However, no significant difference was observed in the score of students' attitudes toward the future career among matriculated female and male students ($P=0.427$). In addition, a significant difference was observed between international male and female students regarding the score of students' attitude toward future career ($P=0.038$), in a way that the mean scores of male and female students were estimated at 21.20 ± 3.36 and 19.66 ± 3.08 , respectively. However, no significant

difference was observed between all male and female career (P=0.059).
students in the study in terms of the score of future

Table 1: distribution of absolute and relative frequency of selecting the items in the questionnaire of the attitude of Kermanshah dental students toward their discipline

	Admission type	Totally disagree		Disagree		No idea		Agree		Totally agree	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
I chose this field based on others' recommendations	Matriculated	16	11/2	36	25/2	17	11/9	63	44/1	11	7/7
	International	19	24/7	22	28/6	12	15/6	18	23/4	6	7/8
I am satisfied with my choice of career	Matriculated	4	2/8	9	6/3	20	14/0	62	43/4	48	33/6
	International	5	6/5	3	3/9	4	5/2	32	41/6	33	42/9
The objectives behind the taught topics meet the individual expectations of students	Matriculated	15	10/6	59	41/5	27	19/0	37	26/1	4	2/8
	International	3	3/9	27	35/1	17	22/1	25	32/5	5	6/5
I became more interested in this field after starting my education	Matriculated	8	5/6	20	14/0	31	21/7	57	39/9	27	18/9
	International	6	7/9	9	11/8	14	18/4	25	32/9	22	28/9
I believe that my career become more valuable as I progress in the field	Matriculated	3	2/1	9	6/3	16	11/2	61	42/7	54	37/8
	International	1	1/3	6	7/9	5	6/6	31	40/8	33	43/4
I believe that students of other fields have a positive attitude towards my field of education	Matriculated	6	4/2	8	5/6	14	9/9	56	39/4	58	40/8
	International	11	14/3	2	2/6	6	7/8	27	35/1	31	40/3
I believe that my community has a positive attitude towards my field of education	Matriculated	4	2/8	7	4/9	11	7/7	51	35/7	70	49/0
	International	2	2/6	4	5/2	2	2/6	30	39/0	39	50/6
I selected this field merely based on my interest	Matriculated	7	4/9	38	26/8	32	22/5	43	30/3	22	15/5
	International	6	7/8	11	14/3	13	16/9	23	29/9	24	31/2
I selected this career because it would have higher income than other careers in the future	Matriculated	1	/7	16	11/2	26	18/2	64	44/8	36	25/2
	International	4	5/2	5	6/5	9	11/7	41	53/2	18	23/4

Table 2: Absolute and relative frequency of selecting the items in the questionnaire of the attitude of Kermanshah dental students to future career

	Admission type	Totally disagree		Disagree		No idea		Agree		Totally agree	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
The instructors in this field can encourage the students to pick the specialty field which best suits them	Matriculated	29	22/0	36	27/3	42	31/8	18	13/6	7	5/3
	International	15	19/2	32	41/0	22	28/2	5	6/4	4	5/1
I believe that this career has good income	Matriculated	2	1/5	6	4/5	24	18/2	84	63/6	16	12/1
	International	2	2/5	4	5/1	19	24/1	41	51/9	13	16/5
I have no concern about the marketing of this field	Matriculated	7	5/3	35	26/5	39	29/5	38	28/8	13	9/8
	International	12	15/4	12	15/4	14	17/9	28	35/9	12	15/4
I believe that general dentists have higher occupational opportunities than specialists	Matriculated	12	9/2	34	26/2	43	33/1	38	29/2	3	2/3
	International	11	14/1	29	37/2	17	21/8	18	23/1	3	3/8
I love working as a dental clinician	Matriculated	4	3/0	3	2/3	21	15/9	62	47/0	42	31/8
	International	2	2/5	1	1/3	7	8/9	37	46/8	32	40/5
Increased rate of admission endangers the occupational future of dentists	Matriculated	1	7/8	8	6/1	10	7/6	18	13/6	95	72/0
	International	3	3/8	1	1/3	9	11/4	17	21/5	49	62/0

Table 3: Attitude score of males and females towards their discipline and future career

Admission type	Gender	Attitude towards discipline			P-value ^a	Attitude towards future career			P-value ^a
		Number	Mean	Std. deviation		Number	Mean	Std. deviation	
Matriculated	Male	66	33/06	4/53	0/493	66	21/05	3/04	0/427
	Female	77	32/56	4/11		77	20/63	3/06	
	Total	143	32/79	4/30		143	20/82	3/05	
International	Male	42	34/44	6/12	0/031	42	21/20	3/36	0/038
	Female	38	31/76	3/95		38	19/66	3/08	
	Total	80	33/23	5/39		80	20/46	3/30	
Total	Male	108	33/59	5/22	0/045	108	21/11	3/16	0/059
	Female	115	32/31	4/06		115	20/29	3/09	
	Total	223	32/94	4/70		223	20/68	3/14	
P-value ^b		0/548				0/405			

^aComparison between males and females using independent sample t-test^bComparison between admission type using independent sample t-test

Table 4: Comparison of the score of students' attitudes toward their discipline between various admission years and based on the type of admission

Year	Matriculated			Year	International			Total	
	Number	Mean	Std. deviation		Number	Mean	Std. deviation	Year	Number
1389	3	31/67	1/53	0	-	-	3	31/67	1/53
1390	20	35/45b	4/14	0	-	-	20	35/45b	4/14
1391	25	32/20ab	2/87	0	-	-	25	32/20ab	2/87
1392	20	33/89ab	5/17	32	33/65a	4/84	52	33/74ab	4/92
1393	19	30/67a	3/79	21	35/21a	4/40	40	33/00ab	4/67
1394	31	33/06ab	3/75	18	31/28a	6/68	49	32/41ab	5/03
1395	25	31/71a	5/14	9	31/00a	5/07	34	31/55a	5/05
P-value*		0/008			0/095			0/050	

Data of students from academic year 2010 were not used due to small sample size.

*One-way ANOVA and tukey's test

Similar superscripted letters indicate no significant difference ($P > 0.05$).

Table 5 shows the comparison of the students' attitudes score toward the future career between various admission years based on the type of admission. In this context, no significant difference was observed between the matriculated students of various admission years in terms of the mean score of attitude toward future career ($P = 0.380$). Moreover, a significant difference was observed between the mean

score of international students' attitude toward their future career in various admission years ($P = 0.028$), in a way that the highest and lowest means were related to students entering the university in 2014 and 2013, respectively. Furthermore, no significant difference was observed in the mean score of all students' attitudes toward future career in various admission years ($P = 0.087$).

Table 5: Comparison of the score of students' attitudes toward the future career between various admission years based on the type of admission

Year	Matriculated			International			Total		
	Number	Mean	Std. deviation	Number	Mean	Std. deviation	Number	Mean	Std. deviation
1389	3	20/33a	4/73	0	-	-	3	20/33	4/73
1390	20	21/89a	2/28	0	-	-	20	21/89a	2/28
1391	25	20/16a	2/64	0	-	-	25	20/16a	2/64
1392	20	20/95a	2/91	32	19/59a	3/70	52	20/10a	3/46
1393	19	20/68a	2/43	21	22/24b	2/68	40	21/50a	2/65
1394	31	21/35a	3/47	18	20/29ab	2/85	49	20/90a	3/22
1395	25	20/21a	3/83	9	19/67ab	2/65	34	20/06a	3/52
P-value*		0/380			0/028			0/087	

Data of students from academic year 2010 were not used due to small sample size.

*One-way ANOVA and tukey's test

Similar superscripted letters indicate no significant difference ($P > 0.05$).

Discussion

The present study aimed to evaluate the attitude of matriculated and international dental students toward their discipline and future career. One of the most important results in the current research was the lack of a significant difference between matriculated and international students regarding attitude toward discipline and future career. Generally, evaluation of the questions related to the discipline showed that a high percentage of students were satisfied with their chosen discipline. High earnings, interest in the field, and high social status were among the most important factors in choosing the discipline. In a research by Memarpour et al. (21) in Shiraz, Iran, the most important reason for choosing a career in dentistry was having a reputable job. Moreover, income was introduced as another important factor in choosing this discipline. Having a private job and financial independence were regarded as important factors in choosing a career in dentistry, reported by Khami, Baharvand and Mashal (17, 18, 22). Furthermore, the comprehensive evaluation of dental students in the US by Weaver et al. (23) demonstrated that the possibility of setting working hours in the profession and serving the community were the most important reasons for choosing a dental profession. Meanwhile, income was reported as the fourth reason for selecting this discipline. In a research by Al-Bitar et al. (24) on Jordanian students, the most important reasons for choosing this discipline were having a decent job socially and helping people. In another research in Ireland, the simplicity of the job, job independence, regular working hours, high income, and helping people were reasons for choosing dentistry (25). In this regard, our findings are in line with the results obtained by the mentioned studies.

Based on the participants' statements in the present study, more than half of them selected this field out of interest. An interest in discipline is one of the important factors for scientific advancement while a lack of interest in the field causes frustration to continue studying (26). However, according to the

results of the present study, the percentage of people who chose this field solely for their personal interest was higher than that of other studies in medical and environmental health students in Iran (3, 4). The higher rate of interest in selecting the field of dentistry, compared to other medical fields, might be due to a better social image, higher income, possibility to study at higher levels, and spiritual gratification. Similar results were detected in studies performed on medical and dental students in Iran and other countries (15, 17, 27, 28).

In a research by Karibe et al. (29) on dental students in Canada, Thailand, and Japan, a large percentage of students have chosen this field with personal interest. In the current research, the interest in the field increased in about half of the students after graduation. In a study by Sofola et al. (30) in 2008, students' interest in the field of dentistry increased and the tendency to change discipline has diminished with the increase of academic years and the start of the clinical course. In this respect, our findings are congruent with the results obtained in the mentioned study. Meanwhile, Nematelahi et al. (31) conducted a research on 75 first and last-year dental students in 2010, reporting that sixth-year students had a negative attitude toward the field of dentistry, compared to first-year students. In addition, last-year students were less satisfied with their discipline, which is inconsistent with our findings.

According to the results of the present study, satisfaction with discipline was higher among last-year students, compared to other students. In a research by Hasanzadeh et al. (32) in 2016, medical students had a more negative attitude toward their future career in the final semesters. Based on the results of various studies, dental students are generally more satisfied with their discipline, compared to other medical fields (33). In the current research, a high percentage of the students confirmed the effect of the admission rate of students on the increased risk of future career. In this respect, some of the students expressed their concern about their future career in this profession. This issue

has been reported in various studies performed on medical students in different schools (4, 5) and environmental health students (3) in Iran and other countries of the world (6, 7, 28). In the current research, the mean score of future career was higher than its theoretical mean. Meanwhile, in a research by Hedayati et al. (20) on dental students in Shiraz, the mean score of future career was lower than its standard mean, which showed a better attitude in students currently studying in Kermanshah University of Medical Sciences toward their future career.

In the current conditions of Iranian society, excessive admission of medical and dental students and the higher tendency of students and their families, who play a considerable role in choosing discipline, toward the field of dentistry have increased the admission of students in these fields, which decreases the possibility of job mobility and social benefits. It is recommended that similar studies be performed using other occupational and educational satisfaction assessment questionnaires in larger statistical populations and in dentists working in specialized fields. One of the major drawbacks of the present research was the lack of measuring tools, low student cooperation, and the low number of higher education students.

Conclusion

According to the results of the present study, the majority of students were satisfied with their chosen discipline. In addition, a high level of income, interest in the discipline and gaining a high social position were recognized as the most important factors for selecting this discipline.

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