

Career Motivations: Differences and Similarities between Public and Private Dental Schools in Saudi Arabia

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Abstract

Objective: The aim of this study was to assess the motivators choosing dentistry as a career among dental students at Umm – Al Qura public dental school and compare the results with previous study conducted at Ibn – Sina private dental school.

Methods: This study is a continuation of a previous similar study that was carried out at Ibn – Sina private dental school. A self- administrated questionnaire was used for data collection.

Results: A 69.3% of dental students choosing dentistry as a first career among Ibn – Sina dental students when compared with the response of Umm – Al Qura dental students (61.5%). A significant difference in the motivator factors between public and private dental students was also observed. Private dental school students were found to be motivated by financial factors (6.51 ± 3.26), while the public dental school students were motivated more by people factors (7.52 ± 3.57).

Conclusion: All the students assessed both in public and private dental schools, listed dentistry as a career choice primarily as they enjoy helping people, although the flexibility of the study program and money gains also appealed.

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Introduction

The practice of dentistry is unique among health care professions in that the majority of dentists are independent health care providers^[1]. Many issues may be considered when choosing a career; work environment, financial rewards and availability of prestigious alternatives^[2,3]. There have been several studies assessing underlying entry into the dental profession^[1-5]. The motivating factors for selecting any career are complex and in dentistry is no exception. Therefore it is essential to understand the motivating factors, priorities, perceptions of the profession and socio-demographic backgrounds of students who choose this career^[4]. Motivators vary among the same student population or in different student populations; moreover, the relative importance of these factors may differ between males and females^[3,4].

In recent decades, however, there has been a massive growth in the number of private dental schools in the Kingdom of Saudi Arabia (KSA). According to statistics obtained from the Ministry of Education, there are 26 dental schools; seven private and nineteen dental schools are public. The students admitted to attend University participate in a one-year preparatory course after which, based on their Grade Point Average (GPA), they are committed to a medical, dental or other allied college. The degree of Dental Bachelor and Bachelor of Oral Surgery is a six year course, including one year of rotating internship. Private dental schools obtain a tuition fee from their students that are considered the main source of income for these schools^[6].

Studies have indicated that in spite of the variation in student populations at all universities, the motives for studying dentistry remain essentially the same^[5,7,8]. Similarities in attitudes towards joining the dental profession in both private and public dental



school students tend to outweigh differences. Similarities are shown with respect to delivery of high quality of service; independence and financial security. Differences are reflected in the contradictions between service and status, service and regular working hours, and service and financial security. There was also no significant difference in the reasons that motivated these students to pursue a dental career^[5,8].

Students' motives for studying dentistry have been a subject of interest for years because of the potential to understand the psychological state and subsequent job satisfaction for the dentist. Studying the motivators at different situations and their differences may facilitate a healthier interaction between a teacher and student.

Very little information is available about differences in the perceptions of students from private and public dental schools in KSA.

The aim of this study, therefore, is to identify different motivators among students choosing dentistry as a career at Umm – Al Qura public dental school and compare the results with a previous study conducted at Ibn –Sina private dental school.

Methods

The current study is a continuation for a similar study previously conducted in the academic year of 2012 - 2013, as a survey for the students at Ibn- Sina private dental school^[1].

Data collection

Data was collected from second to sixth year dental students of dental school at University of Umm Al-Qura in Makkah, KSA via self-administered questionnaires^[1]. The questionnaires and research methodology for the study were reviewed and approved by the collage's Institutional Review Board (IRB).

Questionnaire design

The survey instrument was two-page, self-administered questionnaire. Demographic variables on the questionnaire included race, gender, educational level, family income, and parents' education. Previous research has identified these variables as correlates of educational ambition and attainment.

The questionnaire consisted of 31 items classified as five groups of reasons. It was written in English then translated into Arabic to ensure all aspects were understood by all students. The questions were designed to identify those factors which might impact the decision of a student to embark on a career in dentistry. These factors included parental background; economic factors, and personal professional and vocational reasons^[1].

Validity and reliability of the questionnaire

Prior to the distribution of the questionnaire to dental students, the questionnaire was pilot-tested on a convenience sample of dental students at the college of Dentistry. The pilot test did not reveal any significant problems in question wording or questionnaire design.

The reliability of the questionnaire was tested after three weeks of the study by redistributing it to 30 students. The reliability of the two sets of responses was compared statistically using weighted Kappa. The Kappa statistics ranged from 0.89 to 0.96.

Survey method

To start the students were instructed to strictly answer with either "Yes" or "No" regarding the question of whether dentistry was the student's first choice. Each item on the questionnaire contained a statement which required the respondent to indicate their level of agreement on a 10 point-scale ranging from 0 = strongly disagree to 10 = strongly agree. Higher scores therefore indicated greater agreement with the statement concerned. Questionnaires were distributed among the samples and subsequently all the samples were recollected and analyzed after three weeks^[1].

Statistical methods

The data was transferred into a computer spreadsheet, then analyzed to generate frequency and percentage tables using the SPSS software version 20.0 (Chicago Inc.). Parametric tests were used to investigate any statistically significant differences between the scores for different groups. The student t-test was used to analyze two groups and one way ANOVA was used to analyze more than two groups. Factor analysis for the motives was carried out. A level of $p \leq 0.05$ was considered significant result.

Results

Of the 252 male and female undergraduate dental students recruited from grade two to six at Umm –Al Qura dental school in Makkah, [140 (55.6%) females and 112(44.6%) males], only 197 (78.2%) responded which included 120 (85.7%) females and 77 (68.8%) males.

Regarding the paternal occupations of the students, the most commonly stated were professors or doctors ($n = 61$), engineers ($n = 52$), teachers ($n = 38$), private occupations ($n = 24$). As regards, family incomes of more than 50,000 SRA were 13.7%; 31.8% between 20,000 and 50,000 SRA; 29.4% under 20,000 SRA and 25.1% were not recorded.

(Table 1) shows the percentages of students who stated that dentistry was their first choice of career, 61.5% of the students

replied *positively* with the rate of males to females students being 55.4 % and 67.6% respectively. Medicine was the first choice for 20% of the students who replied *negatively* to the question, 23.2% and 16.8% as the ratio between males and females respectively. Pharmacy was the third choice (by 15.8%) of the students where a higher percentage (18.4%) was evident among males compared with (13.2%) among females. (2.5%) of the students recorded other jobs. A significantly higher percentage (69.3%) was recorded among Ibn – Sina students who had chosen dentistry as the first career when compared with the response at Umm – Al Qura students (61.5%) (Table 2)

Table 1: Percentages and p values of students' choice to pursue dentistry as a career and the primary field of interest according to the collage and gender.

Primary field of interest	Umm – Al Qura		
	Male	Female	p value
Dentistry	55.4%	67.6%	0.003*
Medicine	23.2%	16.8 %	
Pharmacy	18.4%	13.2%	
Other	3%	2.4%	
			Total
			61.5%
			20%
			15.8%
			2.5%

*Significant at $p \leq 0.05$

Table 2: Percentages and p values of students selecting dentistry as the primary field of interest according to the university and gender.

Primary field of interest	Umm – Al Qura		Ibn- Sina	
	Male	Female	Male	Female
Dentistry	55.4%	67.6%	68.3%	69.8%
Total	61.5%		69.3%	
p value	0.05*			

*Significant at $p \leq 0.05$

The different motives for becoming a dentist and their mean score values are shown in (Table 3), for male and female students separately. Question 15, “*I like the autonomy that dentists have*” was the strongest motive with the highest mean value (9.01) representing 69% of the respondents. Question 29 “*I enjoy helping people*” had the second highest score and motive with mean value of 8.06 represent 64% of the respondents. The other three motives stated (in questions 3, 23 and 28) showed nearly the same mean of response (8.02) but with different percentages of response 55% for question “*My GPA encouraged me to choose dentistry as a career*”, 63% for “*dentistry is a prestigious profession*” and 67% for the question “*there is not much ‘on-call’ work*”. Within the 31 questions and motives, ten items showed a significant difference between the males and females $p < 0.05$.

Table 3: Means and Standard Deviations (SD) of the participants according to gender.

Question	Gender		Total
	Male	Female	
1	0.29 (0.91)	0.38 (0.75)	0.34 (0.65)
2	0.36 (0.22)	0.12 (0.32)	0.24 (0.46)
3	7.92 (3.57)	8.11 (3.98)	8.02 (3.87)
4	3.57 (2.43)	3.34 (2.11)	3.46 (1.89)
5	6.42 (3.55)	4.11 (2.46)	5.27 (3.14)*
6	6.17 (4.25)	3.89 (1.91)	5.03 (3.27)*
7	6.32 (3.23)	3.21 (1.65)	4.77 (3.51)*
8	5.36 (2.17)	7.43 (4.22)	6.40 (4.07)
9	5.78 (2.65)	8.82 (3.43)	7.30 (4.22)*
10	1.26 (0.76)	0.78 (0.13)	1.02 (0.88)*
11	4.75 (2.32)	4.58 (2.43)	4.67 (3.01)
12	8.25 (4.64)	6.21 (3.69)	7.23 (4.55)*
13	6.59 (3.46)	8.14 (4.67)	7.37 (4.57)
14	1.32 (0.74)	2.16 (1.92)	1.47 (1.02)
15	8.31 (4.51)	7.91 (4.24)	9.01 (4.86)
16	4.32 (2.17)	3.46 (1.21)	3.98 (1.69)
17	5.35 (3.21)	5.72 (3.11)	5.54 (3.34)
18	6.58 (3.99)	7.36 (4.15)	6.97 (3.69)

19	6.40 (3.31)	6.92 (3.77)	6.66 (4.01)
20	4.13 (2.19)	4.99 (2.82)	4.56 (3.51)
21	7.25 (4.52)	7.93 (3.57)	7.59 (4.64)
22	8.24 (4.17)	5.84 (2.65)	6.86 (3.92)*
23	8.73 (3.99)	7.30 (3.50)	8.02 (4.61)
24	7.52 (4.45)	7.91 (4.58)	7.72 (4.63)
25	5.13 (2.59)	6.26 (3.83)	5.70 (2.91)
26	0.98 (0.49)	1.04 (0.51)	1.01 (0.62)
27	8.67 (4.73)	6.14 (3.37)	7.41 (3.76)*
28	6.98 (3.45)	9.08 (4.55)	8.03 (4.32)*
29	6.89 (3.12)	9.22 (5.44)	8.06 (4.67)*
30	0.92 (0.48)	0.99 (0.48)	0.96 (0.85)
31	0.00 (0.00)	0.00 (0.00)	0.00

*Significant at $p \leq 0.05$

Five of these questions showed the highest mean among both males and females (as illustrated in (Table 4). Prestige, money, autonomy, independence and flexibility respectively, were the five motivators deemed highly important for males. The five highest motivators among females also included helping people and flexibility.

Table 4: Means for the top five reasons for pursuing a career in dentistry, for males and females.

Motives		Mean scores
Males		
1.	Dentistry is a prestigious profession	8.73
2.	Dentistry pays better than other jobs open to me	8.67
3.	I like the autonomy that dentists have	8.31
4.	I can start to practice dentistry independently after graduating	8.25
5.	I like to make a lot of money	8.24
Females		
1.	I enjoying helping people	9.22
2.	There is not much 'on-call' work	9.08
3.	Dentistry has more regular hours than other caring professions	8.82
4.	I like working with people	8.14
5.	My GPA encouraged me to choose dentistry as a career	8.11

(Table 5) illustrated the top five motivators pursuing a career in dentistry among Umm –Al Qura dental students and compared with that of Ibn – Sina dental students. “*I like the autonomy that dentists have*”, was the top reason at Umm – Al Qura dental students which was significantly higher than at Ibn – Sina dental students. However “*Dentistry pays better than other job options*”, was one of the five top motives among Ibn – Sina dental students with a higher significant mean than that recorded by Umm – Al Qura dental students.

Table 5: Means for the top five reasons for pursuing a career in dentistry, for Umm – Al Qura and Ibn–Sina dental schools.

Motives		Mean scores
Umm – Al Qura		
1.	I like the autonomy that dentists have	9.01#
2.	I enjoy helping people	8.06
3.	There is not much 'on-call' work	8.03
4.	Dentistry is a prestigious profession	8.02
5.	My GPA encouraged me to choose dentistry as a career	8.02
Ibn – Sina		
1.	I enjoy helping people	8.25
2.	Dentistry is a prestigious profession	8.09

3.	I like to make a lot of money	7.73
4.	There is not much 'on-call' work	7.59
5.	Dentistry pays better than other job options open to me	7.03&

Significant higher among Umm – AlQuradental school at p level ≤ 0.05
 & Significant higher among Ibn – Sina dental school

(Table 6), addressed the perception of dentistry as a career and motivation for choosing it as a career Factor 1, MONEY, is composed of motives that make up the financial and security aspects of dentistry as a career. Factor 2, PEOPLE, is related to caring and helping other people. Factor 3, FLEXIBILITY, is related to the flexibility in scheduling appointments. Three simple additive scales were constructed that summed up the items for each factor. For comparison purposes and because the different scales consist of varying numbers of factors, the scales were normalized by dividing the number of contributing factors so that the highest possible score was 10 and the lowest score was zero.

Table 6: Means for factor loadings on primary motive factors.

Motivator	MONEY	PEOPLE	FLEXABILITY
Dentistry ensures financial independence	0.847		
Dentistry pays better than other jobs	0.812		
I like to make a lot of money	0.804		
A career in dentistry offers job security	0.784		
It is easy to find employment	0.749		
I want to be self-employed	0.721		
I like the autonomy that dentists have	0.699		
I want to treat/help people to improve their appearance		0.883	
I enjoy helping people		0.869	
I like working with people		0.791	
Dentistry gives me the opportunity to work with my hands		0.692	
Choosing dentistry will give me time to spend with my family			0.713
There is not much 'on-call' work			0.578
A dentist has a flexible schedule			0.569
Dentistry has more regular hours than other caring professions			0.561
Dentists usually do not deal with life or death cases on a routine basis			0.546
Percentage of variance explained	27.41	8.89	7.82
Percentage of cumulative variance explained	27.41	36.3	44.12

(Table 7) shows the means and (SD) of the three major motivational factors at Umm – Al Qura dental school. These factors were higher for PEOPLE (7.52) than for FLEXIBILITY (6.67) and MONEY (5.20). Results of the independent sample t-test showed significantly higher mean scores between males and females: MONEY (p = 0.000), PEOPLE (p = 0.02) and FLEXIBILITY (p = 0.003). MONEY factors were rated higher by males than females whilst PEOPLE and FLEXIBILITY factors were higher in females than males. By comparing the three major motivator factors at the two dental schools, Umm – Al Qura dental school showed a higher significant mean of the major motivation factors. PEOPLE factors were the highest impact motivators at Umm – Al Qura dental school, with significance difference with the other two factors (p = 0.03). No significant difference was found between the three major motivation factors at Ibn – Sina dental school (p = 0.182). (Table 8)

Table7: Means, Standard Deviations (SD) and p values for the major motivation factors at Umm – Al Qura dental school according to the gender.

Gender	MONEY	PEOPLE	FLEXABILITY
Males	6.08 (3.82)	6.92 (3.71)	5.99 (2.87)
Females	4.32 (2.74)	8.12 (4.59)	7.35 (4.10)
Total	5.20 (2.51)	7.52 (3.57)	6.67 (3.98)
t (p value)	3.84 (0.000)*	2.41 (0.02)*	2.97 (0.003)*

*Significant at p ≤ 0.05

Table 8: Comparing the means of the major motivation factors according to dental school type.

University	MONEY	PEOPLE	FLEXABILITY	One way ANOVA (p value)
Ibn - Sina	6.51 (3.26)	6.81 (3.51)	6.35 (3.34)	1.71 (0.182)
Umm – Al Qura	5.20 (2.51)	7.52 (3.57)	6.67 (3.98)	3.41 (0.03)*
t (p value)	2.49 (0.01)*	2.44 (0.01)*	1.07 (0.28)	

*Significant difference at p level ≤ 0.05

Discussion

Little is known about how dental students in private dental schools differ from those studying in public colleges in terms of motivations and career aspirations. The aim of the present study was to assess any variability in the reasons students choose a career in dentistry at private and public dental schools. The present study was conducted at Umm –Al qura University (a public dental school) and the results were compared with a previous study conducted at Ibn – Sina dental school (a private school)^[1].

The present study showed that 61% of the students entered dental school with a career in dentistry being their first choice with high percentages among female students (67.6%). These results were similar to the results at Ibn – Sina^[1] and at Jordan dental schools^[4].

It has been previously reported that there is an increase in the number of females that are studying dentistry in the KSA^[1] and this study also confirmed a higher number of female dental students than male dental students in both Umm – Al Qura University and Ibn – Sina dental schools. One possible explanation is that there is limited ‘on-call’ work, less strenuous activity and more flexibility of work when compared to the medical profession^[1,4,9]. Other studies^[8-11] have reported many factors that strongly influenced career choice among students who indicated that dentistry was their first choice: prestige, good employment opportunity abroad, and regular work hours. Due to the roles that women traditionally assume with child-raising, their immediate career plans may reflect these responsibilities. Male dentists are more likely to be the principal earners in their family compared with females, and the results of this study are parallel with the previous findings^[8-11] where male students account prestige, self-employment and high income as the top motives to choose dentistry as a career.

The female students record schedule-flexibility and helping people as motives, are in agreement with the results of the same study that was previously carried out at Ibn – Sina University^[1].

At Ibn – Sina (the private dental school), money appears as a major motivator which can explain by the nature of admission in both public and private dental schools. In public dental schools, admission is primarily dependent on the GPA of the student; however a significant proportion of students in private schools are admitted based on a combination of both test scores and the added ability to pay high tuition fees^[1,7].

Regarding the factor analysis, dental students’ motives for pursuing dentistry as a career are organized around three principle factors: PEOPLE, MONEY and FLEXIBILITY as shown in the previous study^[1]. The present study reports the importance of PEOPLE factors followed by FLEXIBILITY and MONEY factors compared with the previous study where the three major loaded factors had the same impacts. MONEY factors were significantly high as recorded by Ibn – Sina dental students. In contrast PEOPLE factors were the most significant motivators among Umm – Al qura dental students. This reflects the influence of financial factors on the private dental students where as the public dental students were more impacted by social factors.

This study observed no significant difference in any other reasons that motivated students to pursue a dental career. This may be due to the high level of competition that exists to join any dental schooling, thus the general process of entry selects for a degree of similarity in the students that enter both public and private schools^[12,13].

Conclusion

The current study provides an insight into the specific motives underlying the appeal of dentistry as a career comparing the differences in students that join private and public dental schools in terms of background, motivations and career aspirations.

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