



## Motivations and Perceptions Among Dental Students in Mumbai City for Taking Up Dentistry as A Career Choice

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### ABSTRACT

#### INTRODUCTION:

Over the years the younger generation is becoming more pragmatic in their choice of career. Their choices are not governed by society's traditional hierarchy of choices, but rather by their own personal choice and interest. Thus this study was designed to understand the reasons that motivated the students in the city of Mumbai to take up dentistry as a career and also their future plans regarding the same.

#### AIMS & OBJECTIVES:

To find out the students' reasons for choosing dentistry, reasons for rejection of medicine, preferences for post graduation and future plans

#### MATERIALS AND METHODS:

This was a cross sectional questionnaire study which was broadly divided into 4 categories ,i.e, reasons for choosing dentistry, reason for rejection of medicine, post graduation and future plans. Each dental student was individually asked the questions included in the survey which was on a scale of 5 from strongly agree to strongly disagree, and the responses were recorded digitally on a tablet.

#### RESULTS:

In the present study, 47.4 % students had opted for dentistry as their first choice, a higher percentage being observed in females(49.3%) than males(38.9%). 36% students took up dentistry because of personal interest in the field and 49% were motivated by their parents to take up dentistry. Some of the most common reasons to take up dentistry were existence of an artistic theme in dentistry, high income and social status. The least common reasons observed were ability to be self employed, flexible work hours and to help people improve their health. 60.6% thought doing post graduation is a necessity. 85.7% wanted to gain experience under an experienced mentor before starting on their own.

#### CONCLUSION

A great number of students stated they wanted to go abroad because of better opportunities and income. Very few are inclined towards research or teaching and this is a loss to the field.

#### KEYWORDS

dental education, students career choice, Mumbai students.

#### INTRODUCTION

Given the plethora of choices available to students post high school, the choice of a career becomes one of the most crucial decisions of their life. Dentistry is one of the many such options available, that few opt for.

In India, the thinking is still rather narrow-minded. Most opt for the mainstream professional careers. As students try to make a career choice while in secondary school, they face the problem of matching their career choices with their abilities and school performance. In the earlier days, it was quite the social norm that if a person wanted to enter the healthcare profession, the first choice would be medicine, followed by dentistry and other paramedical branches. However, over the years people are becoming more pragmatic and their choice of career is no more governed by society's traditional hierarchy of choices, but rather by their own personal choice and interest. Thus it is important to know what reasons are driving them towards the field of dentistry. Investigating the views and professional perspectives of health students contributes to a better understanding of how they direct their studies during the academic period, plan their career, guide their interpersonal relationships, and determine the role they play in society (1).

In certain countries like USA, UK, Thailand, Taiwan, and Singapore admission to dental school is on basis of additional factors like personal interview and motivational essay which has been correlated to the fact that they are more altruistically motivated. However, in countries like India, Brazil, Japan, South Africa, Australia admissions are solely on basis of academic ability without evaluating the attitude of the applicant (2).

Thus this study was designed to understand the reasons that motivated the students in the city of Mumbai to take up dentistry as a career and also their future plans regarding the same.

#### MATERIALS AND METHODS

This was a cross sectional questionnaire study which was conducted over a period of three months amongst the undergraduate and post graduate students studying at D. Y. Patil School of Dentistry, Navi Mumbai, in the year 2015.

A 71-item questionnaire (Appendix 1) was drafted from previous studies (3) with questions relevant to both Under Graduate and Post Graduate students. The questionnaire was broadly divided into 4 categories; reasons for choosing dentistry, reason for

rejection of medicine, post graduation and future plans. Ethical clearance was obtained and signed consent was taken from each participant. A pilot study was done on a sample of 20 dental students. Modifications were made to remove areas of ambiguity in the final questionnaire. The students were informed about the purpose of the study and confidentiality was assured. It was a guided questionnaire, with the sample size being 485 students. Participation was voluntary and anonymous. Each student was individually asked the questions included in the survey and the responses were recorded digitally on a tablet.

Data was collected and tabulated in excel sheet and analysed using IPSS 22.0 software.

## QUESTIONNAIRE- APPENDIX 1

### RESULTS

Tables 1-9 give the results to all the questions asked in the questionnaire.

### DISCUSSION

The present study was carried out with the aim of understanding the students' reasons and motives behind taking up dentistry as a career choice and also to know their future short term and long term plans.

When it comes to making the right career choice it does not only depend on one factor, but is a coalescence of several factors. Analyzing and understanding these factors would be helpful as, if expectations and outcome differ, an individual's satisfaction with the career is affected.

In the present study, the male:female ratio was 1:4. This 'feminization of dentistry' in India has been reported in other studies too (4). This has also been reported in other countries like USA, UK, Australia, New Zealand, France, Denmark, and Peru (5,6,7,8,9). Many females' interest in having both work and family life may explain this trend (2). Since  $p$ -value>0.05 indicates no association for gender and choice for dentistry. (Table 7)

In the present study, 47.4 % students opted for dentistry as their first choice, a higher percentage being observed in females (49.3%) than males (38.9%) which is similar to findings by Halawany (10). 63.2% of the students who chose the same had a parent/parents who were dentists and 51.3% had parent/parents who were doctors. Since  $p$ -value>0.05 indicates no association for Parents profession and choice for dentistry (Table 8). However, according to Jaiswal et al only 24.1% of the students chose dentistry as their first career choice (4). Since  $p$ -value<0.05 indicates association for motivation and choice for dentistry. Parents and Personal interest are significant contributor (Table 9).

42.6% opted for medicine as their first choice of career option which was similar to findings in a Saudi study (10). As per Jaiswal et al's study 79.3% took up dentistry as they could not enter medicine (4).

Some make decision as they don't have better choices and some take the path of least resistance like a career path advocated by their parents or elder siblings (4). In our study, 36% took up dentistry because of personal interest in the field. 49% were motivated by their parents to take up dentistry. According to Ramesh et al, 38.24% of the participants were influenced by their family and friends for choosing dentistry as a career (11). This finding was consistent with other studies done in India (12) and worldwide (13). This situation is comparable to that in studies conducted by Karibe et al (14), Marino et al (15), Jover et al (16) and Tangade et al (17), who reported that parents were very influential among Asian students. This high percentage of parents being the motivating factor could be seen in two ways, as guiding them for a brighter future or such a high level of involvement could lead to stress (17,18) or lack of satisfaction in the future.

### REASONS FOR CHOOSING DENTISTRY

Altruism, job security, work independence and social status are some of the most common motivational factors for choos-

ing dentistry as a career (2). In the present study, some of the most common reasons are existence of an artistic theme in dentistry, high income and social status. The least common reasons observed were ability to be self employed, flexible work hours and to help people improve their health.

According to a multinational study carried out by Toit et al (2), two motives emerged most often: "Dentists have enough time off for family life" (37.4 percent) and "I want to be a dentist who helps poor and underprivileged people . . . improve their oral health" (36.3 percent).

In our study, 33% agreed that they took up dentistry because of existence of an artistic theme in dentistry out of which 56.3% were males and 33.4% were females. This was similar to Jaiswal et al's study where 53.7% agreed to the same (4). According to Aggarwal et al 23.3% felt that they had good manual skills (12).

30.8% agreed to the fact that they took up dentistry because of high income which was similar to Jaiswal et al (4) and Halawany (10), but contradictory to Selvan et al where only 3.4% took up dentistry because of high income (20).

Ability to be self employed as one of the reasons for choosing dentistry was disagreed upon by most (64.7%) in this study. This was contradictory to findings by Aggarwal et al, Dastjerdi et al, Hallissey et al (2).

Only 20% agreed to the fact that dentistry is a profession that allows you to be your own boss, which was similar to the findings by Ramesh et al (11) and Aggarwal et al (12). As per Jaiswal et al, 72.4% took up dentistry as they felt that it allowed independence of work (4). However 48.5% in our study disagreed.

In the present study, 56% did not feel that dentistry offers flexible working hours which was contradictory to Jaiswal et al (4) and Aggarwal et al (12) where 63% and 44.4% respectively felt that dentistry offers flexible working hours.

Our study showed that 20% opted for dentistry as they felt that dentistry had no emergency, however 47.7% disagreed to this fact.

21% felt that dentistry gives job security, out of which more males (33.3%) felt the same. According to Halawany (10) and Jaiswal et al (4), 37.1% and 49.3% respectively felt the same where as according to Belsi et al (1), job security was the most important reason for choosing dentistry.

When asked if gaining scientific knowledge was one of the main aims to take up dentistry, 73.2% of the participants disagreed. This was contradictory to the study by Belsi et al (1).

Job satisfaction was a reason for 12% of our participants to take up dentistry which was similar to Selvan et al (12.3%) (20).

Only 8.2% took up dentistry to help people improve their health, out of which males(13.4%) held a higher percentage. This is contradictory to the study done by Jaiswal et al (4), where 84.3% took up dentistry since they desired to work in healthcare, with females having a significantly higher score ( $p$ <0.05) (4).

Out of 22% that agreed they wanted to change someone's smile, around 50% were males whereas only 12% were females.

In our study, around 25% took up dentistry as they wanted to play a role in community health promotion which was different from Freire et al's study where only 6.9% opted for the same. Around 24% took up dentistry because of good job opportunities abroad whereas in a Saudi study (10) 33.4% thought the same.

### REASONS FOR REJECTION OF MEDICINE

Most of the students did not take up medicine because of

fear of blood, as advised by family members and because they thought it was difficult to make money in that field which was contradictory to findings in Gallagher et al's (3) study where the main reasons were long working hours, stressful life and less hands on work. Following are the reasons given by the participants for rejecting medicine as a career option.

25% did not take up medicine because of long working hours

23.9% because of stressful life

33.5% because of less hands on work.

23.5% because of longer and more difficult career path

71.5% stated that their family members told them not to take up medicine

26.4% because of lack of flexible working hours

32.3% because of emergency duties.

81% because of fear of blood

63.1% because of difficulty to make money in our country, out of which 10% strongly agreed to the fact.

35% because of too much studies.

**POST GRADUATION AND FUTURE PLANS (CHOICE FOR POSTGRADUATION)**

In the present study maximum students (28.9%) wanted to take up Conservative Dentistry, followed by Oral Surgery (21.5%) followed by Orthodontics (14.7%) and Pediatric Dentistry (11.3%) which was similar to the study by Halawany (10). More males opted for Oral Surgery and Orthodontics, whereas more females opted for Conservative and Pediatric dentistry. Out of the ones who opted for Conservative Dentistry, 30% had personal interest in the field and 19% thought it was lucrative as compared to the other three where a higher percentage of students chose the same as they thought it was lucrative.

Majority (82.6%) thought that dentistry was the right choice they had made which was similar to the study done by Amith et al where 97% were happy with their decision (21).

60.6% felt that doing post graduation is a necessity, however according to Halawany's (10) study, only 36.5% felt the same.

70% wanted to do a postgraduation, which is similar to study done by Amith et al (21), Aggarwal et al (12) and Freire et al (22). This is different from other countries; a majority of Japanese (61.2%) and Canadian (51.6%) students, for example, said they had decided to work as general dentists (12).

85.7% of the participants wanted to gain experience under a mentor before starting on their own. It was reported that dental students in India are trained to excel theoretically, but there seems to be a problem between what is learned and what is applied in the clinics (23). This could prevent a majority of them from practicing immediately after graduation (11). The following are the choices expressed:

56.5% wanted to work for a charitable trust.

74.2% want to open their own clinics.

56% wanted to do consultations.

52.6% wanted to study abroad.

In the present study, 35% wanted to settle and practice dentistry abroad, out of which more males opted for the same. However, according to Ramesh et al (11), 16.4% wanted to go abroad, out of which there was equal distribution between males and females. This could be because of monetary bene-

fits and greater scope for professional growth (12,24).

According to Aggarwal et al (12), 66.9% said they want to go abroad in the future for further enhancement in the dental field. Better opportunity for studying there was reported as the leading factor (30.1%), followed by better income (16%), not liking the status of dentistry in India (12.5%), and family abroad (8.4%).

In the present study, 0% wanted to do research which was contradictory to the study by Ramesh et al, where 10% wanted to do research (11). In our study 24% students would not mind taking up a government job, where as in Brazil (22) only 2.7% agreed to the same. Only 18% would consider teaching in future, where as in a study done in Brazil (22) only 0.6% agreed to the same.

**CONCLUSION**

Destiny is not a matter of chance, it is a matter of choice (William Jennings Bryan). Our findings show that some of the most common reasons for taking up dentistry are high income and social status clubbed with parental pressure. In our country, most students start their professional studies at around 19 years of age, when most of the decisions are governed by parental aspirations. Since parents are such an important influential factor in decision making it is imperative that they understand the implications of their choices. In the long run, passion and satisfaction become very important to be successful more than societal factors.

It is important that students must be guided regarding their future plans as well. A great number of students stated they wanted to go abroad because of better opportunities and income, which draws us to the fact that there is a brain drain. Very few are inclined towards research which is upsetting to see, as today we practice evidence based medicine. Very few are interested in teaching, which is a disturbing trend as good teaching is the basis for a strong foundation for the future of dentistry in the country.

**TABLE 1- FREQUENCY DISTRIBUTION OF QUESTION NOS.1 TO 7.**

		Number of Respondents	Percentage (%)
1.Sex	Male	91	19.4%
	Female	377	80.6%
2.Year in which you are studying?	1 <sup>st</sup> BDS	96	20.5%
	2 <sup>nd</sup> BDS	82	17.5%
	3 <sup>rd</sup> BDS	87	18.6%
	4 <sup>th</sup> BDS	79	16.8%
	intern	80	17.1%
	PG 1st year	22	4.7%
	PG 2nd year	19	4.1%
	PG 3rd year	4	.9%
	Other	0	.0%
3.Are your parents/parent in the medical profession?	Yes	69	14.7%
	No	399	85.3%
5.Was DENTISTRY your first choice as a career option?	Yes	221	47.4%
	No	245	52.6%
6.Was MEDICINE your first choice as a career option?	Yes	197	42.6%
	No	265	57.4%
7.Who motivated you to take up Dentistry?	Parents	219	49.0%
	Friends	15	3.4%
	Teacher	8	1.8%
	Your Dentist	27	6.0%
	Career Councillor	8	1.8%
	Personal Interest	161	36.0%
	Forced to take up Dentistry	9	2.0%
	Other	0	.0%



**TABLE 4 – FREQUENCY DISTRIBUTION OF QUESTION 36 & 37.**

		Male		Female		Total	
		Number of re-pond-ent	%	Number of re-pond-ent	%	Number of re-pond-ent	%
36.DO YOU THINK YOU HAVE MADE THE RIGHT CHOICE?	Yes	64	72.7%	320	84.9%	384	82.6%
	No	4	4.5%	11	2.9%	15	3.2%
	May be	16	18.2%	41	10.9%	57	12.3%
	I dont Know	4	4.5%	5	1.3%	9	1.9%
	Total	88	100.0%	377	100.0%	465	100.0%
37.Do you think doing a post graduation is a necessity?	Yes	49	70.0%	174	58.4%	223	60.6%
	No	11	15.7%	46	15.4%	57	15.5%
	May be	8	11.4%	64	21.5%	72	19.6%
	I dont Know	2	2.9%	14	4.7%	16	4.3%
	Total	70	100.0%	298	100.0%	368	100.0%

**TABLE 5- FREQUENCY DISTRIBUTION OF PREFERRED CHOICE FOR PG(Q.38&39)**

		sex		Total	
		Male	Female	Count	Column N %
38.Preferred choice for PG?	Aesthetic	1	2	3	.8%
	Con-servative dentistry	15	87	102	28.9%
	Cosmet-ics	0	2	2	.6%
	FOREN-SIC	0	1	1	.3%
	OMR	2	4	6	1.7%
	OPATH	0	5	5	1.4%
	Oral surgery	16	60	76	21.5%
	Ortho-dontics	14	38	52	14.7%
	Pediatric dentistry	5	35	40	11.3%
	Periodon-tics	8	27	35	9.9%
39.You chose the above because	Both	1	2	3	1.0%
	Personal Interest in that field	50	231	281	91.2%
	You think it is lucrative	8	16	24	7.8%
	Total	59	249	308	100.0%

**TABLE 6-FREQUENCY DISTRIBUTION OF FUTURE PLANS(Q.40-Q.52)**

40.Do you want to Study abroad?	Yes	48	53.3%	196	52.4%	244	52.6%
	No	17	18.9%	60	16.0%	77	16.6%
	May be	25	27.8%	107	28.6%	132	28.4%
	I dont Know	0	.0%	11	2.9%	11	2.4%
	Total	90	100.0%	374	100.0%	464	100.0%
41.Do you want to do a PG?	Yes	70	78.7%	249	67.3%	319	69.5%
	No	6	6.7%	21	5.7%	27	5.9%
	May be	11	12.4%	86	23.2%	97	21.1%
	I dont Know	2	2.2%	14	3.8%	16	3.5%
	Total	89	100.0%	370	100.0%	459	100.0%
42.Do you want to Gain experience under someone?	Yes	69	76.7%	331	87.8%	400	85.7%
	No	8	8.9%	11	2.9%	19	4.1%
	May be	11	12.2%	32	8.5%	43	9.2%
	I dont Know	2	2.2%	3	.8%	5	1.1%
	Total	90	100.0%	377	100.0%	467	100.0%
43.Do you want to Work for a charitable trust?	Yes	39	43.3%	225	59.7%	264	56.5%
	No	25	27.8%	37	9.8%	62	13.3%
	May be	24	26.7%	109	28.9%	133	28.5%
	I dont Know	2	2.2%	6	1.6%	8	1.7%
	Total	90	100.0%	377	100.0%	467	100.0%
44.Do you want to Open your own clinic?	Yes	12	80.0%	37	72.5%	49	74.2%
	No	1	6.7%	4	7.8%	5	7.6%
	May be	1	6.7%	7	13.7%	8	12.1%
	I dont Know	1	6.7%	3	5.9%	4	6.1%
	Total	15	100.0%	51	100.0%	66	100.0%
45.Do you want to do Consultations?	Yes	44	59.5%	176	55.3%	220	56.1%
	No	14	18.9%	38	11.9%	52	13.3%
	May be	15	20.3%	84	26.4%	99	25.3%
	I dont Know	1	1.4%	20	6.3%	21	5.4%
	Total	74	100.0%	318	100.0%	392	100.0%
46.Do you want to Settle and practice dentistry abroad?	Yes	40	45.5%	122	32.6%	162	35.1%
	No	25	28.4%	113	30.2%	138	29.9%
	May be	19	21.6%	112	29.9%	131	28.4%
	I dont Know	4	4.5%	27	7.2%	31	6.7%
	Total	88	100.0%	374	100.0%	462	100.0%
47.Do you want to Join someone else's clinic?	Yes	13	14.8%	76	20.3%	89	19.2%
	No	41	46.6%	139	37.1%	180	38.9%
	May be	30	34.1%	150	40.0%	180	38.9%
	I dont Know	4	4.5%	10	2.7%	14	3.0%
	Total	88	100.0%	375	100.0%	463	100.0%
48.Do you want to do Research?	Yes	0	.0%	0	.0%	0	.0%
	No	34	38.2%	157	41.6%	191	41.0%

**TABLE 7- COMPARISON OF SIGNIFICANCE OF CAREER OPTION AND SEX OF THE PARTICIPANT**

Crosstab					
			Sex		Total
			Male	Female	
Was DENTISTRY your first choice as a career option?	Yes	Count	35	185	220
		% within sex	38.9%	49.3%	47.3%
	No	Count	55	190	245
		% within sex	61.1%	50.7%	52.7%
Total		Count	90	375	465
	% within sex		100.0%	100.0%	100.0%

**Chi-square test result:**

	Value	df	p-value
Pearson Chi-Square	3.176	1	0.075

**Interpretation:**

Since p-value for the chi-square is greater than that of 0.05 indicates no association for gender and choice for dentistry.

**TABLE 8- COMPARISON OF SIGNIFICANCE OF CAREER OPTION AGAINST PARENTS PROFESSION**

Crosstab							
				If YES,			Total
				Allied	Dentist	Doctor	
Was DENTISTRY your first choice as a career option?	Yes	Count	5	12	20	37	
		% within If YES,	33.3%	63.2%	51.3%	50.7%	
	No	Count	10	7	19	36	
		% within If YES,	66.7%	36.8%	48.7%	49.3%	
Total		Count	15	19	39	73	
		% within If YES,	100.0%	100.0%	100.0%	100.0%	

**Chi-square test result:**

	Value	df	p-value
Pearson Chi-Square	2.995	2	.224

**Interpretation:**

Since p-value for the chi-square is greater than that of 0.05 indicates no association for Parents profession and choice for dentistry.

**TABLE 9- COMPARISON OF SIGNIFICANCE OF CAREER OPTION AGAINST MOTIVATION**

				Who motivated you to take up Dentistry?							Total
				Parents	Friends	Teacher	Your Dentist	Career Counsellor	Personal Interest	Forced to take up Dentistry	
Was DENTISTRY your first choice as a career option?	Yes	Count	88	9	1	18	4	90	1	211	
		%	40.4%	60.0%	14.3%	66.7%	66.7%	55.9%	11.1%	47.6%	
	No	Count	130	6	6	9	2	71	8	232	
		%	59.6%	40.0%	85.7%	33.3%	33.3%	44.1%	88.9%	52.4%	
Total		Count	218	15	7	27	6	161	9	443	
		%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**Chi-square test result:**

	Value	df	p-value
Pearson Chi-Square	22.672	6	.001

**Interpretation:**

Since p-value for the chi-square is less than that of 0.05 indicates association for motivation and choice for dentistry. Parents and Personal interest are significant contributor.

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