

Mindset of Budding Dentist in Choosing Their Career after BDS

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Abstract:

Background: One of the most important decisions one will ever make is choosing career option. The role of learning is recognized because of its significance in ensuring professional skills, effective patient care and career progress. So, the awareness about various career options after bachelor of dental surgery (BDS) plays an important role in achieving professional security.

Materials and methods: The study was conducted among 322 dental students in Priyadarshini dental college and hospital, Tiruvallur, Tamilnadu. Students from first year to interns were included in the study. A standardized, self-administered questionnaire consisting of 15 close-ended multiple choice questions was distributed and the received data were analysed.

Results: The awareness of various career options after BDS most of them knew was the conventional ones like owning a clinic, doing PG, teaching profession, fellowship courses and overseas education. But only few knew about the new options like dental blogging, dental youtuber and dental tourism. Also, an average group of participants knew about the career options like govt. jobs, MBA in hospital management, dental officers in armed forces.

Conclusion: It can be concluded that most of the participants were aware of different career options available after BDS. So there is a need to enhance the knowledge and awareness regarding the different career options available to a general dentist after BDS. This would help in broadening the arena of the dental professionals and thereby help flourish the dental fraternity.

Keywords: Career choice, career option, dental education, dental graduates, future career.

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I. Introduction:

The happiest moment among the dental students is the day of completing their final year of Bachelor of Dental Surgery (BDS). Internship is the period where the students walk with pride of treating patients as a doctor and also involved in performing various academic activities in the college. Career is the action taken by the aspiring graduates to achieve the desired goal by occupation.^[1] In India, there are around 300 dental colleges approved by DCI and 25,000 dentist passes out every year.^[2] The WHO estimates that there is around 1:7500 of dentist to population.^[3] During the past decade there has been marked increase in the number of dental colleges with significant number of students passing every year. In remote cities in India the dentist population ratio is around 1:10,000.

Student's desire for selecting a effective career path is an vital concern for admission committees and as well as the faculty members, precisely in the field of dentistry.^[4] The dental curriculum is very difficult, and also imposes significant depression among the students and also affecting their attitudes for higher studies.^[5] Till date there is paucity of the data for the dental students motivations and attitude regarding the dentistry field.^[6] In addition, the selection of career of every dentist is also influenced by parents, relatives, students and counselors but only few takes their own decision.^[7] The selection for the choice of a career is a important decision because it has an noticeable impact on the individuals' future life.^[8] Recently there has been enormous growth in the students admitted to dental colleges and also rapid rise in dentist population across the various cities in India. This trend has worried majority of the dental students to choose the correct career path after finishing BDS course.^[9]

However, less dental job opportunities in India, increased development of new private dental clinics, and less reorganization of overseas dental qualifications have created intense pressure on dental graduates. There are many options available which are recently available after BDS which most of the student are not aware off. Also, renaissance is essential among the attitude of dental policymaker, administrator, and educators to expand the arena of Indian dental profession to boost employment opportunities. In this backdrop the present study was carried out to evaluate the knowledge and attitude toward the career options after BDS among dental

students. Further, the study also evaluated the various theories and models and factors influencing of career choice among dental students and also to analyse the factors influencing of career choice among the students

II. Materials And Methods:

This was a descriptive cross sectional survey, conducted among undergraduates dental students and interns in our institute. The purpose of this study was explained to the participants. About 320 participants were enrolled in this study. Students from the first year to interns pursuing BDS course were included in the study. Post graduates and the teaching staff members were excluded in the study. A standardized self-administered questionnaire consisting of 15 close-ended multiple choice questions were distributed among the participants. After collecting the data from the students, the statistical analysis were done

Questionnaire:

1	Why did you choose this course (BDS)?
2	Do you know what all the career options are after BDS?
3	If yes, what will you prefer after BDS?
4	Do you have an idea of studying post graduation after BDS?
5	Reasons to do post graduation after BDS?
6	what are you thinking about the challenges in doing post graduation?
7	If you like to do MDS which branch will you choose?
8	Do you aware of fellow ship courses after BDS?
9	If you like to join fellow ship course which branch will you select?
10	Do you aware of non clinical practice after BDS?
11	If yes, what will you pursue?
12	Which branch do you think more difficult in MDS?
13	Do you think that working in clinical side is valuable than working in non-clinical side?
14	Do you aware of a new emerging field in dentistry by the term "Forensic odontology"?
15	What think the scope of "Forensic odontology" in India?

III. Results:

A total of 322 participants gave their responses. Upon asking the reason for choosing BDS as career option, about 48% of participants gave the reason of inability to pursue MBBS seat, followed by the reason of choosing on own interest which is 23.4%, 21.8% responded that they want the title "Dr" before their names and 6.9% have chosen due to parental/ peer pressure.

Upon asking whether they know the career options after BDS, 81.3% gave positive response and 18.7% gave negative response. On asking the preference after BDS among positive responders, 51.3% of students are willing to do post-graduation, 15.7% responded to join government job and 10.3% responded to do their own clinical practice.

On asking the reason to do post graduation after BDS, 44.9% answered that they will join post graduation to gain more knowledge in a particular branch. 25.9% answered that they will get more job opportunities. 23.8% responded that they will get better income, very limited responses were got for their prestige and as they have done BDS no other option except post-graduation.

Upon asking for the challenges in doing post graduation, 62.6% responded as financial insufficiency, 24.8% responded as family commitments and 11.9% responded as inadequate knowledge to pursue post-graduation.

Upon asking the most preferred branch in doing MDS, 45.1% responded for Oral maxillofacial surgery, 16.3% responded for Orthodontics, 14.2% for Endodontics, 9% for Prosthodontics, very limited responses were got for the other branches.

On asking whether they are aware of fellowship courses after BDS, 64% gave positive responses. Among the positive responses, 48.3% responded to join Cosmetic dentistry, 22.6% responded to join Implant dentistry, 12.8% responded to join Laser dentistry, 9.2% responded to do Rotary Endodontics, 4.9% responded to do Periodontal management with flap surgery and a very limited responses were got for Micro-dentistry.

Upon asking whether the participants are aware of non clinical practices after BDS, in that 51.6% gave positive responses. Among the positive responses 28.9% responded to do Masters in hospital administration, 22.4% responded to do Masters in public health, 17.9% responded to do Masters in psychology, 15.9% responded to do Masters in clinical research, 11.9% responded to do Masters in business management and a very few responses were got for Masters in basic science.

When participants were asked about which is the difficult branch in MDS, 58.7% replied as Oral and maxillofacial surgery, 12.7% responded as Orthodontics, 7.5% responded as Oral pathology, 6.5% responded for Prosthodontics, 5.3% for Public health dentistry, and a very limited responses for other subjects.

When asked about working in clinical side is more valuable than working in non clinical side based on income basis, 68.3% made their positive responses.

Upon asking the participants whether they are aware of the new emerging field in dentistry, “Forensic odontology”, 64.9% gave their positive responses and finally for the question about the thinking for the scope of Forensic odontology in India, 40.4% responded that the branch might be successful, 31.1% replied that it will be doubtful and 28.6% of participants replied that they have no idea.

Further, the study also showed that nature of the factor of Q8 influences the career chose BDS, in the data shows that, the each option having its own label directly proportional to the increasing in trend occurs at Q1 having the variance (91.93). Thus we can conclude that year wise the linear model proves that “Yes” & “No” both the variables in the factor will go increasing in order that influencing the Q8.

The association between Q1 with Q10 states that, “year wise the linear model proves Yes and No both the variables in the factor will go increasing in order that influencing the Q10.

The association between Q1 with Q10 states that, “year wise the linear model proves Yes and No both the variables in the factor will go increasing in order that influencing the Q4.

In addition, year wise the linear model proves that the students who choose “Yes” will go increasing and those who say “No” on very less deviation from its order that influencing the Q2.

The factor analysis of the variables with factor (Year) was shown in table 1. Thus, from the data of 320 students in the data, the difference of Q7, Q8, Q10, Q12 and the cumulative Q4, Q6, Q7, Q8 both having a common vector of variables Q7 and Q8. So the factors of these two variables were not interlinked so it is not a independent factor in the set.

Table: 1 Factor Analysis of The Variables With Factor (Year)

Factor analysis/correlation		Number of obs = 320		
Method: principal factors		Retained factors = 5		
Rotation: (unrotated)		Number of params = 35		
Factor	Eigenvalue	Difference	Proportion	Cumulative
Q1	0.5426	0.21296	1.1781	1.1781
Q2	0.32964	0.21797	0.7157	1.8938
Q4	0.11167	0.06162	0.2425	2.1363
Q6	0.05005	0.02513	0.1087	2.2449
Q7	0.02492	0.06938	0.0541	2.2991
Q8	-0.04446	0.06602	-0.0965	2.2025
Q10	-0.11048	0.09563	-0.2399	1.9626
Q12	-0.20611	0.03114	-0.4475	1.5151
Q14	-0.23725	.	-0.5151	1
LR test: independent vs. saturated: chi2(36) = 77.18 Prob>chi2 = 0.0001				

The factor loadings (pattern matrix) and unique variances were shown in table 2. The pattern matrix clearly shows that the factors of the variables in Q1, Q2, Q14, Q4, Q6, Q7, Q8, Q10, Q12 the unloading of data is not to be precise outcome. The classified 5 factors with its uniqueness observations column is good when the absolute value having very less outliers.

Thus the table 2 shows that 0.779 is the least value of the uniqueness column. So we conclude that the factor in Q8 is not influencing variable in the data.

Table: 2 Factor loadings (pattern matrix) and unique variances

Variables	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
Q1	-0.0275	0.1419	-0.0084	0.1747	0.0504	0.946
Q2	0.3352	-0.3177	-0.0068	-0.0034	0.011	0.7865
Q4	0.1232	-0.2552	0.172	0.0803	0.0365	0.8823

Q6	0.1263	0.1542	-0.0723	-0.0531	0.1233	0.937
Q7	0.4544	-0.0366	-0.1121	-0.0244	0.0009	0.8785
Q8	0.2572	0.227	-0.025	0.0479	-0.0302	0.779
Q10	0.1455	0.1553	0.2027	-0.0611	0.0324	0.9089
Q12	0.0563	0.132	0.1469	-0.0447	-0.0156	0.9556
Q14	0.3184	0.1588	0.0302	0.0406	-0.0593	0.8673

The principal component analysis showed that , from the data of 320 students in the data, the difference of Q4, Q6, Q7, Q8 both has a common cumulative vector Q6, which were increasing in nature (Table 3).

Table: 3 Principal components and correlation analysis

		Number of obs = 320		
		Number of comp. = 9		
Rotation: (unrotated = principal)		Trace = 9		
		Rho = 1.0000		
Components/Factors	Eigenvalue	Difference	Proportion	Cumulative
Q1	1.42203	0.171135	0.158	0.158
Q2	1.2509	0.0910339	0.139	0.297
Q4	1.15986	0.130517	0.1289	0.4259
Q6	1.02934	0.0233732	0.1144	0.5402
Q7	1.00597	0.0977856	0.1118	0.652
Q8	0.908185	0.0459037	0.1009	0.7529
Q10	0.862282	0.124416	0.0958	0.8487
Q12	0.737865	0.1143	0.082	0.9307
Q14	0.623565	.	0.0693	1

Based on the linear regression analyses as shown in table 4, it was found that gregariousness (t=14.54,p=0.000), intrinsic comparison (t= -0.32, p=0.752), YEAR and the information from Q1 (F=0.1, p=0.752), are statistically significant to explain the factor Q1 in Year. So we do it is analyzed that in choosing career option among the students in the 5 year categorized with the variable Q1 is influenced each other.

Table 4: Linear regression analysis of the variable Q1

		Number of obs = 320				
		F(1, 318) = 0.1				
		Prob> F = 0.752				
		R-squared = 0.501				
		Root MSE = 1.2589				
Q1	Coef.	Robust Std. Err.	t	P>t	[95% Conf. interval]	
YEAR	-0.0139626	0.0441408	-0.32	0.752	0.100808 0.0728823	
_cons	2.225478	0.1530738	14.54	0	1.924312 2.526643	

The table 5 shows that the F-value is 9.800, P-value is 0.000 are statistically significant at 5% level of significance. This implies the regression fit is significant and the independent variables appropriately explain the dependent factor year in our college. The individual influence of all the independent variables is presented in the following co-efficient table as follows:

Table 5: Linear regression analysis of the variable Q2

		Number of obs = 320				
		F(1, 318) = 0.9800				
		Prob> F = 0.00				
		R-squared = 0.732				
		Root MSE = .38643				
Q2	Coef.	Robust Std. Err.	T	P>t	[95% Conf. interval]	
YEAR	0.0003431	0.0136626	0.03	0.00	-0.02654	0.0272237
_cons	1.18024	0.0456078	25.88	0	1.090509	1.269971

The table 5 shows that, Robust SE = 0.014, R-Square =.823, adjusted R-square is 0.712 are statistically significant and the independent variable, Q4 is 82.3% variance over year in our college students. The F-value was 4.40, P-value is 0.0367 and it was found to be significant.

Table 6: Linear regression analysis of the variable Q4

		Number of obs = 320				
		F(1, 318) = 4.40				
		Prob> F = 0.0367				
		R-squared = 0.823				
		Root MSE = .36449				
Q4	Coef.	Robust Std. Err.	T	P>t	[95% Conf. interval]	
YEAR	0.0285871	0.0136255	2.1	0.037	0.00178	0.0553945
_cons	1.075222	0.0409723	26.24	0	0.994611	1.155833

Further, there was no significant relationship between Q6, Q8, Q19 and years.

IV. Discussion:

The effect of continuous learning is highly required for enhancing the professional skills, for the betterment of patient care and also for the career options.^[10] The present descriptive observational survey was carried out to assess the awareness of various career options after BDS among the dental students. It is very vital for the emerging dentist to know maximum information about the various career options and also to excel in the field of dentistry. According to a survey conducted by Aeran et al., 54.90% opted for BDS because they could not secure a seat for MBBS. In a study done by Bhagwani, about 60% of participants choose dentistry because of inability to secure MBBS seat and about 28% choose dentistry on their own interest. In this study, as a career option, 51.3% of students are desired to do post graduation. In a study conducted by Garla et al.^[13] in 2011, 57.39% of undergraduates and interns aspired to do post-graduation education to achieve better wages and job prospects. Meanwhile, Aggarwal et al.^[14] reported that 79.1% of students wanted to pursue post graduation.

In this study, regarding specialty in MDS course, 45.1% responded for Oral maxillofacial surgery, 16.3% responded for Orthodontics, 14.2% for Endodontics, 9% for Prosthodontics. In a study done by Shetty et al.^[15] 34.2% students preferred Conservative dentistry and Endodontics branch. Meanwhile, Datta and Datta^[16] reported that for all years except final year, oral surgery was most popular discipline. No student in the final year was interested to do MDS in oral surgery. For the final year students, the popular disciplines were Prosthodontics (45.5%) and Conservative dentistry (36.4%)

In this study, 64.9% gave their positive responses for the Forensic odontology as an emerging field in dentistry. Similarly in a study done by Abdul et al.^[17] 62.5% of the participants were aware of the branch of science called forensic dentistry. However, there is a general lack of practice of forensic odontology among dental practitioners in India. This could be owing to multiple reasons. There are very few institutions offering formal training in forensic odontology. Most of the practitioners had no formal training. There are no fully equipped labs for forensic odontology in India. Forensic odontology was not included as a part of our academic curriculum until recently. There are very few workshops or conferences that have been conducted in forensic odontology per year for dental surgeons, which could kindle an interest among the students to probe deeper into the subject.

III. Conclusion:

Thus the study concludes that, majority of the students were unaware about various career options after completing the BDS. So there must be career enhancing and awareness programs to increase the knowledge among the students. Further, faculty members should conduct counseling programs to motivate the students and also guide them to choose the accurate career option.

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