

Motivating factors associated with choosing orthodontics for future prospects among newly passed out dental professionals in Maharashtra, India

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ABSTRACT

Background: Choosing postgraduate subject as a future career is always tricky but there are factors associated which persuade the dental undergrads to choose the particular postgraduate course and orthodontics is one of them. Hence, the aim of present study was to determine motivating factors associated with choosing orthodontics for future prospects among newly passed out undergraduate dental professionals. **Materials and Methods:** This was a cross-sectional descriptive questionnaire study. The present study is conducted among the freshly pass out dental professionals who had started their setup. The study was conducted in October–November 2019. The study was conducted among three cities of Maharashtra. Convenient sampling was used to select the samples. A close ended questionnaire was prepared. **Results:** Majority of study participants {64 (45.39%)} belonged to age group 26–28 years. Females respondents {82 (58.15%)} were more than male study participants. Majority of dental professionals {71 (50.35%)} choose orthodontics dentofacial orthopedics as the specialty for future prospect. Most common reasons {16 (22.57%)} to choose orthodontics for future prospect by majority of respondents was “Can earn more money.” Age was significantly ($P = 0.005^*$) associated with money as reason to choose orthodontic as future prospect. Gender was significantly associated with family pressure ($P = 0.01^*$) and love, interest, and passion for orthodontics ($P = 0.01^*$). **Conclusion:** It was concluded that majority of dental professionals choose orthodontic as their preferred choice. Main reason for choosing orthodontics was monetary benefits followed by the reason that finds orthodontics intellectually and clinically challenging.

Keywords: Dental, orthodontics, professionals, undergraduate

Introduction

After completing bachelor's degree in dentistry, next step

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is the choice of appropriate subject for better future prospect. A few investigations have detailed that most of the recently pass out undergrad dental students like to proceed with their education toward a higher degree.^[1-3] There are different variables which impact the decision of a dental student in picking the subject for postgraduate degree.

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Among different branches in dentistry, orthodontics is the most established branch to begin a degree.^[4] According to American relationship of orthodontists, orthodontics is characterized as that zone of dentistry concerned about the supervision, direction, and amendment of the developing or developed dentofacial structures, including those conditions that require adjustment and movement of teeth or redress of mal-connections and malformations of their related structures and the alteration of relationship between and among teeth and facial bones by the utilization of powers as well as the incitement and redirection of functional forces inside the craniofacial complex.^[5]

Orthodontists manage treatment of malocclusions, which might be a consequence of tooth abnormality as well as unbalanced jaw relationships. Orthodontics has gained immense popularity as a postgraduate dental specialty program in India.^[6,7]

As shown by few studies in United States,^[8,9] Canada,^[10,11] and United Kingdom,^[12,13] which provide a glance of conscious thought process of undergraduates in selecting orthodontics as their preferred specialty. These examinations demonstrated that most orthodontic occupants were keen on private practice after graduation, with just a couple communicating an enthusiasm for scholastics.

Perceiving the different components which persuaded the dental students in picking orthodontics as a professional career may give significant data relating to the general recognition among graduates about this strength. It additionally helps in remedying them about deceiving factors and furnishing them with proper information in regards to orthodontics, so they can pick right future possibility and therefore, the aim of present study is to determine motivating factors associated with choosing orthodontics for future prospects among newly passed out undergraduate dental professionals.

Materials and Methods

This is a cross-sectional descriptive questionnaire study. The present study is conducted among the freshly pass out dental professionals who had started their setup. List of the dental professionals was obtained from local Indian Dental Association branch. The study was conducted in October–November 2019. The study was conducted among three cities of Maharashtra. The ethical clearance to conduct the study was obtained from the ethical committee of the institutional ethical review board.

Convenient sampling was used to select the samples. The sampling frame of the study includes all the freshly passed out undergraduates in span of last 1 year and started their dental setup. Among all only those undergraduates were included in the studies who are interested in doing Master's degree.

According to the list obtained, 154 dental undergraduates passed out in three cities and started their setup. Out of these, 141 want to continue their education further in a specific specialty. Three

different investigators had conducted the study in three different cities. Informed consent was obtained from the participants before the start of study. If dental practitioners refuse to give his or her consent, other clinic was included in the study. If at the time of survey due to patient appointment dental professional does not take up the survey, the questionnaire was given to assistant to be filled by the dentist and collected later.

Before the start of main study, a pilot study was conducted on small sample of respondents to check the feasibility duration, and cost. Validity and reliability of questionnaire was also checked. Reliability of the questionnaire was determined by using Test–Retest and the values of measured Kappa (k) = 0.87, Weighted Kappa (k_w) = 0.90. Internal consistency of questionnaires was measured by applying Cronbach's-Alpha (α) and the value of α = 0.88 was measured.

A close ended questionnaire was prepared which includes three parts. First part consists of demographic details of study participants that are age, gender, socioeconomic status, undergraduate degree passed out from type of college and dental setup situated in which area. Second part of questionnaire was regarding the choice of specialty for Master's degree. Third part consists of reasons and time of choosing orthodontics as future prospect, person responsible for motivation to take up orthodontic in Master's degree and plans to work after Master's degree.

Statistical analysis

After entry of data in Microsoft excel 2016, SPSS version 22.0 is used to analyze the data. Descriptive statistics is used to determine demographic details, choice of specialty for Master's degree, reasons and time of choosing orthodontics as future prospect and person responsible for motivation. Chi-square test is used to find the association between demographic details and reasons for choosing orthodontics for Master's degree. *P* value less 0.05 was considered significant.

Results

Table 1 shows that majority of study participants {64 (45.39%)} belonged to age group 26–28 years. Females respondents {82 (58.15%)} were more than male study participants. Study participants {71 (50.35%)} mainly belonged to middle class. Most of dental professionals {101 (71.63)} were passed out from private college. Majority of dental setup were situated in peri-urban areas {79 (43.97%)}.

Table 2 shows that majority of dental professionals {71 (50.35%)} choose orthodontics dentofacial orthopedics as the specialty for future prospect.

Table 3 shows that most common reasons {16 (22.57%)} to choose orthodontics for future prospect by majority respondents was "Can earn more money." Second most common reason {(11 (15.49%))} to choose orthodontics was that "Orthodontic is intellectually and clinically challenging." Least common reasons {04 (5.63%)}

Table 1: Demographic details of Study participants (n=141)

Demographic Variables		Endodontists n (%)
Age in years	23-25 Years	59 (41.84)
	26-28 Years	64 (45.39)
	28-30 Years	18 (12.77)
	Total	141 (100)
Gender	Male	59 (41.85)
	Female	82 (58.15)
	Total	141 (100)
Socioeconomic class	Upper	45 (31.91)
	Middle	71 (50.35)
	lower	25 (17.74)
	Total	141 (100)
Undergraduate degree passed out from type of college	Private	101 (71.63)
	Government	40 (28.27)
	Total	141 (100)
Dental setup situated in area	Urban	62 (56.03)
	Peri-urban	79 (43.97)
	Total	141 (100)

Table 2: Choice of Specialty for master's degree (n=141)

Branches	n (%)
Orthodontics Dentofacial Orthopedics	71 (50.35)
Conservative Dentistry and Endodontics	23 (16.31)
Oral and Maxillofacial surgery	12 (8.51)
Pedodontics	7 (4.96)
Periodontics	6 (4.25)
Prosthodontics and Implantology	10 (7.09)
Public Health Dentistry	10 (7.09)
Oral Medicine and Radiology	1 (0.72)
Oral pathology	1 (0.72)
Total	141 (100)

for choosing orthodontic was “Teaching opportunity is more.” Majority of study participants {28 (39.43)} had decided to take orthodontics as future prospect in internship. Teacher during BDS were the main source of inspiration for 34 (47.88%) of dental professionals to take orthodontics.

Table 4 shows that on applying Chi-square test. Age was significantly ($P = 0.005^*$) associated with money as reason to choose orthodontic as future prospect. Gender was significantly associated with family pressure ($P = 0.01^*$) and love, interest, and passion for orthodontics ($P = 0.01^*$). Socioeconomic status was significantly associated with job security and prestige ($P = 0.05^*$). Undergraduate degree passed out from type of college was significantly associated with great academic performance in orthodontic specialty ($P = 0.05^*$). Area in which dental setup was situated was significantly associated with person who motivated the respondents to take up orthodontics as future prospect ($P = 0.04^*$).

Discussion

The present study is conducted to explore motivating factors

associated with choosing orthodontics for future prospects among newly passed out undergraduate dental professionals.

In the present study, age range of study participants was 23–30 years. Majority of study participants were of 26–28 years of age. In a study by Sam G,^[14] age range was 19–30 years. In a study conducted by Al-Hamlan N *et al.*,^[15] age range of majority of study participants was from 25 to 40 years. This may be due to the fact that in the present study only freshly passed out dental professionals were included in the study. In the present study all study participants included were from urban areas. While in study by Shekar S *et al.*,^[16] study participants from both urban and rural areas were included. In the same study,^[16] respondents included were below 20 years or above 20 years. In the present study, female study participants were more than males. Same results were seen in study Shekar S *et al.*^[16] In the study by Al-Hamlan N *et al.*,^[15] male and female were in equal number.

Orthopedics as the future prospect. Same results were reported in study by Sam G^[14] in which orthodontics was first choice of study subjects. Contrasting results were seen study by Sharma V *et al.*^[17] in which majority of study subjects choose oral and maxillofacial surgery as the first choice for future followed by orthodontics. In another conducted by Halawany HS *et al.*,^[18] first choice of specialty was restorative and esthetic dentistry.

In the present study main reason for choosing orthodontics as future prospect was monetary benefits followed by the reason that orthodontics is intellectually and clinically challenging. In a study by Sam G,^[14] Halawany HS *et al.*,^[18] and Al-Hamlan N *et al.*,^[15] most important reason was intellectual content of specialty followed by monetary benefits. In the present study, majority of study participants had chosen orthodontics during internship. While in study by Sam G,^[14] majority of study participants had chosen orthodontics in final year. In a study by Al-Hamlan N *et al.*,^[15] around 39% of orthodontic residents indicated that they had selected the specialty of orthodontics prior to enrollment in dental school while one-third of them selected it during dental school.

In the present study, majority of study participants want to work in both private setup and government job in combination but contrasting results were reported in study by Sam G^[14] where most of the undergrads want to work in Ministry of Health.

Limitations of the study results include many factors like only three cities of Maharashtra were selected for which the results cannot be generalized to the whole nation. Moreover, convenience sampling makes the results further non-generalizable. Nonetheless, the results give a clear indication of the inclination of the undergrads toward the branch orthodontics.

The dental professionals who choose orthodontics a part of their professional career have the responsibility of reclamation of the dental feel and the masticatory capacity of the patients

Table 3: Reasons, time, and person responsible for choosing orthodontics as future prospect

Question	Answer	n (%)
I choose Orthodontics for my Master's degree because	Family Pressure	07 (9.85)
	It is intellectually and Clinically challenging	11 (15.49)
	Can handle young patient easily.	06 (8.45)
	Great academic performance in this branch during Under-graduation	10 (14.08)
	Job security & prestige is more.	09 (12.67)
	Teaching opportunity is more	04 (5.63)
	Love, Interest and passion for this branch	08 (11.26)
	Can earn more money.	16 (22.57)
	Total	71 (100)
I had decided to master's degree in Orthodontics in	2 nd year BDS	00 (0.0)
	3 rd year BDS	05 (7.04)
	4 th year BDS	16 (22.53)
	Internship	28 (39.43)
	After BDS	22 (31.00)
	Total	71 (100)
Person responsible for motivation to take up Orthodontic in Master's degree	Self-motivation	09 (12.67)
	Parents	11 (15.49)
	Teacher during BDS	34 (47.88)
	Fellow student	12 (16.90)
	Senior Student	05 (7.06)
	Total	71 (100)
Plan to work after master's degree.	Teaching faculty in private or Government college	06 (8.45)
	Private dental set up	32 (45.07)
	Combination	33 (46.48)
	Total	71 (100)

Table 4: Association between demographic variables and reasons for choosing orthodontic in Master's degree by using Chi-square test

Demographic variables	Reasons for choosing Orthodontic in master's degree																	
	Family Pressure		Intellectually and Clinically challenging		Handle young patient easily		Great academic performance		Job security and prestige		Teaching opportunity		Love, Interest, and passion		Money		Inspirational person	
	χ^2	P	χ^2	P	χ^2	P	χ^2	P	χ^2	P	χ^2	P	χ^2	P	χ^2	P	χ^2	P
Age in years	0.100	1.22	4.555	2.45	2.880	0.89	1.510	1.35	3.554	1.33	3.406	1.27	2.445	0.39	1.044	0.05*	3.406	1.08
Gender	0.023	0.01*	1.095	0.09	5.670	0.34	1.492	1.35	1.009	0.08	1.002	2.80	1.310	0.01*	2.566	1.03	1.344	3.44
Socio-economic status	1.228	1.50	2.341	1.24	2.356	1.30	3.001	0.56	4.342	0.05*	0.880	1.78	2.047	3.22	6.314	0.36	5.662	2.51
Undergraduate degree passed out from type of college	0.910	0.67	0.305	0.19	2.677	0.43	2.201	0.05*	0.692	2.36	0.722	0.93	0.010	1.56	2.542	0.77	7.334	2.10
Dental setup situated in area	0.774	1.50	1.408	2.49	3.788	0.11	1.377	1.26	0.107	0.23	1.205	0.38	3.488	2.10	1.204	1.37	1.023	0.04*

*P<0.05 is significant

with support of the speech. Loss of any of these capacities have the mental and the social effect which can restrain one's job expected to be in the general public. So for the prevention of these problems if the number of orthodontics increases it will be good for the patients.

Conclusion

From above it was concluded that majority of dental professionals choose orthodontic as their preferred choice. Main reason for choosing orthodontics was monetary benefits followed by the reason that finds orthodontics intellectually and clinically challenging. Most of the study participants

had decided to take up orthodontics as future prospect in internship. Teachers during Bachelor's degree were the main source of inspiration to choose orthodontics. Most of the respondents want to work in combination of both government duty and private practice. Gender was significantly associated with family pressure and love, interest and passion for orthodontics.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients

understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflict of interest

There is no conflict of interest.

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