

# Orthodontics as a prospective career choice among undergraduate dental students: A prospective study

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## Abstract

**Objectives:** The purposes of this study were to investigate the factors influencing the career choice of dental students and to identify the future life plans of the students at Prince Sattam Bin Abdulaziz University Dental College who had chosen orthodontics as their future specialty. **Materials and Methods:** An epidemiological descriptive survey was conducted using a set of questionnaire among the second year to fourth year students at Prince Sattam Bin Abdulaziz University, Al Kharj, Saudi Arabia. Data were categorized by demographic variables and were analyzed with statistical methods using descriptive statistical analysis. **Results:** The most important factor influencing the decision to pursue specialty in orthodontics was considering that “orthodontics is intellectually challenging” (23%), followed by “previous positive experience” (15%). The decision to become an orthodontist was made by 3.7% of the respondents in the first year of their course, 44.4% in the second year of their study, 11.1% during the third year of their study, 25.9% during the fourth year of their study, while none of them had made their decision during the final year of their dental school studies. Only one student (3.7) said he planned to work in a private college in an academic setting, five students (18.5%) had plans to do private practice, two students indicated that they would work for the Ministry of Health, while most students (40.7%) reported that they were planning to try a combination of all of the above. Six students (22.2%) remained undecided. **Conclusions:** Majority of the students who had chosen orthodontics as their future specialty of choice at Sattam Bin Abdulaziz University Dental College, Saudi Arabia had taken up this specialty as they felt that orthodontics was intellectually challenging.

**Key words:** Dental students, motivations, orthodontics, specialty of choice

## INTRODUCTION

Orthodontia, also known as orthodontics and dentofacial orthopedics, was the first specialty created in the meadow of dentistry. Orthodontists deal with treatment of malocclusions, which may be a result of tooth irregularity and/or disproportionate jaw

relationships. Malocclusion is not a disease, but an anomalous alignment of the teeth and the way the upper and lower teeth fit together. The prevalence of malocclusion varies,<sup>[1,2]</sup> but using orthodontic treatment indices<sup>[3,4]</sup> which categorize malocclusions in terms of severity, it can be said that nearly 30% of the population present with malocclusions severe

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enough to benefit from orthodontic treatment.<sup>[5]</sup> Dental counseling in its current format is mainly directed toward identifying students' poor academic performance, while no counseling is provided to explore students' academic talents and the potential of succeeding a specific postgraduate dental program, to our knowledge.<sup>[6,7]</sup> Postgraduate dental education is an important pillar to improve the health care sector in Saudi Arabia. Advancing the quality of clinical skills as well as the research output will drive the medical and dental care forward by improving the service level, patient satisfaction, and reducing the complication rate<sup>[6,8]</sup> Nowadays, the number of dental graduates in Saudi Arabia is exceeding 2500 from over 30 dental schools every year.<sup>[9,10]</sup> Orthodontics has gained immense popularity as a postgraduate dental specialty program in Saudi Arabia.<sup>[11]</sup> Recognizing the motivation of dental students in choosing orthodontics as a career specialty might provide valuable information pertaining to the general perception among graduates about this specialty. Moreover, investigating the future practice patterns of orthodontic residents might shed light on how this specialty is developing.<sup>[11]</sup> Several studies have been performed on the selection of various specialties in dentistry by the dental students and several surveys have reported on the job satisfaction, lifestyle, and career of orthodontic residents in the United States,<sup>[11,12]</sup> Canada,<sup>[13,14]</sup> and the UK.<sup>[15,16]</sup>

The objectives of this study were to investigate the factors influencing career choice and categorize the future plans of dental students at Prince Sattam Bin Abdulaziz University Dental College. This study also aims to explore the norms and precedents used by these dental students while selecting a career as orthodontists, and their future aims and pursuits.

## MATERIALS AND METHODS

An epidemiological descriptive survey was conducted using questionnaires among second year to final year students at Prince Sattam Bin Abdulaziz University Dental College, Al Kharj. The purpose of this study was to investigate the factors influencing selection of career as orthodontists by the dental students at Sattam Bin Abdulaziz University Dental College and their future aims and pursuits, and their choice of future working environment after their postgraduation studies as orthodontists. For the first time in the history of Prince Sattam Bin Abdulaziz University Dental College, an epidemiological descriptive survey was conducted wherein all the second year to final year Saudi male dental students were included, since

it was a dental college exclusively meant for male Saudi Arabian citizens. The subjects were second year to final year students, considering the fact that it might be the appropriate time for them to make decisions in choosing their specialty and future working environment. The first year students were excluded from the study, considering the fact that it might be too early for them to decide their specialty and future working environment. The research instrument was a self-administered questionnaire which was already pretested in other previous studies.<sup>[11,17,18]</sup> This survey was completed during regularly scheduled class sessions in the second semester of the academic year 2014–2015, with an average time of 10 min. The questionnaire was carefully designed to maximize the response rate and minimize missing data. The questionnaire consisted of three open questions concerning the specialty of choice and future choice of working environment. The questions were selected from previous similar studies<sup>[11,17,18]</sup> and adapted to the Prince Sattam Bin Abdul Aziz University Dental College context.

Data were analyzed using the statistical software program PASW (predictive analytics software) statistics version 22.0 (SPSS Inc., Chicago, IL, USA).

## RESULTS

There were only male respondents since it was a male college. Age of the respondents ranged from 19 to 30 years. Out of 107 students who took part in this study from Prince Sattam Bin Abdulaziz University Dental College, 27 (25%) students had chosen orthodontics as their specialty of choice [Table 1 and Figure 1]. The subjects were second year to final year students in the academic year 2014–2015. Out of the 27 students who had chosen orthodontics as their specialty, 10 (37%) were from the second year, 5 (19%) were from the third year, 3 (11%) were from the fourth year, and 7 (26%) students were from the final year. As shown in Table 2 and Figure 2, 80% (8 students) of the second year students had made up their mind to choose orthodontics as their career specialty in the second year of their study at the college, while 10% (1 student) had taken the decision in the first year of their study and 10% (1 student) did not respond to this question at all. Also, 60% (3 students) of the third year students had made up their mind to choose orthodontics as their career specialty in third year of their study at the college, while 40% (2 students) had taken the decision in the second year of their study. One hundred percent (3 students) of the fourth year students had taken the decision of

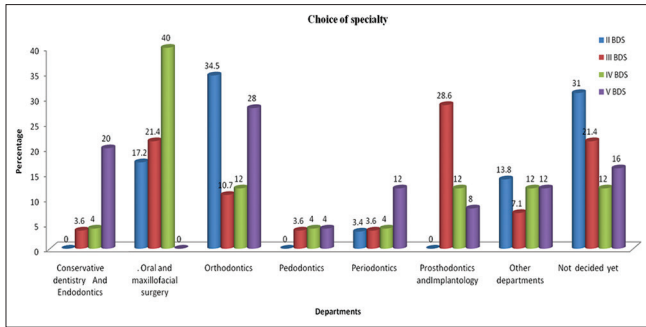


Figure 1: Choice of career specialty in dentistry

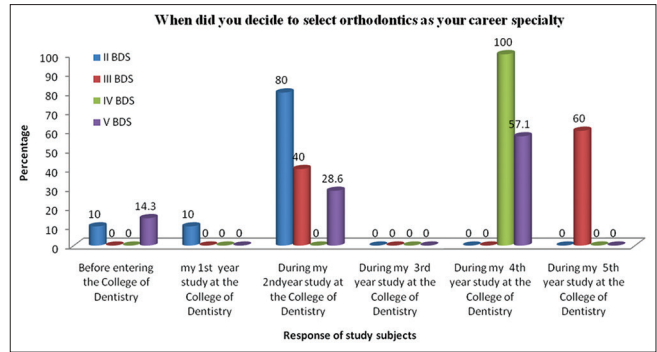


Figure 2: When did you decide to select orthodontics as your career specialty

Table 1: What is your choice of specialty?

	II BDS (n=29) n (%)	III BDS (n=28) n (%)	IV BDS (n=25) n (%)	V BDS (n=25) n (%)
Conservative dentistry and endodontics	0 (0)	1 (3.6)	1 (4)	5 (20)
Oral and maxillofacial surgery	5 (17.2)	6 (21.4)	10 (40)	0 (0)
Orthodontics	10 (34.5)	3 (10.7)	3 (12)	7 (28)
Pedodontics	0 (0)	1 (3.6)	1 (4)	1 (4)
Periodontics	1 (3.4)	1 (3.6)	1 (4)	3 (12)
Prosthodontics and implantology	0 (0)	8 (28.6)	3 (12)	2 (8)
Other departments	4 (13.8)	2 (7.1)	3 (12)	3 (12)
Not decided yet	9 (31)	6 (21.4)	3 (12)	4 (16)

BDS=Bachelor of dental surgery

Table 2: When did you decide to select orthodontics as your career specialty?

During my 1 <sup>st</sup> year of study at the College of Dentistry	1 (10%)	0 (0%)	0 (0%)	0 (0%)
During my 2 <sup>nd</sup> year study at the College of Dentistry	8 (80%)	2 (40%)	0 (0%)	2 (28.6%)
During my 3 <sup>rd</sup> year study at the College of Dentistry	0 (0%)	3 (60%)	0 (0%)	0 (0%)
During my 4 <sup>th</sup> year study at the College of Dentistry	0 (0%)	0 (0%)	3 (100%)	4 (57.1%)
During my 5 <sup>th</sup> year study at the College of Dentistry	0 (0%)	0 (0%)	0 (0%)	0 (0%)

orthodontics as their career specialty in the fourth year of their study at the college. Also, 57% (4 students) of the final year students had taken decision of choosing orthodontics as their career specialty in the fourth year of their study at the college, while 29% (2 students) had taken the decision in the second year of their study. As shown in Table 3 and Figure 3, 20% of the second year students, 40% of the third year students, and 43% of the fifth year students decided to go for orthodontics as their future specialty of choice since orthodontics is intellectually challenging, while 20% of the second year students and 14% of the final year students decided to

go for orthodontics as their future specialty of choice because of their liking to work with younger patients. None of the third year and fourth year students had selected orthodontics as their career specialty for this reason. Ten percent of the second year and 29% of the final year students decided for orthodontics as their future specialty of choice because they liked to work with motivated patients, while none of the third year and fourth year students had selected orthodontics as their career specialty for this reason. Ten percent of the second year students, all the fourth year students, and 14% of the final year students had decided for orthodontics as their future specialty of choice because of previous positive college experiences, while none of the third year students had selected orthodontics as their career specialty for this reason. Ten percent of the second year students had decided for orthodontics as their future specialty of choice because of teaching opportunities, while none of the students other than the second year students had selected orthodontics as their career specialty for this reason. Twenty percent of the second years and 40% of the third year students decided for orthodontics as their future specialty of choice because of research opportunities, while none of the fourth and final year students had selected orthodontics as their career specialty for this reason. Ten percent of the second year students decided for orthodontics as their future specialty of choice because of their love and passion for the subject, while none of the other subjects in the sample had selected orthodontics as their career specialty for this reason. Twenty percent of the third year students had decided for orthodontics as their future specialty of choice because of job prestige, while none of the other subjects in the sample had selected orthodontics as their career specialty for this reason. Interestingly, none of the subjects in the sample had selected orthodontics as their career specialty because of the influence of their family members, inspiration from any faculty member, or due to the reason that the profession of orthodontics brings better

money with less effort and risk. As shown in Table 4 and Figure 4, except 10% of the second year students, none of them had chosen teaching profession in private dental colleges, while 10% of the second year students and 20% of the third year students had intentions of working under the Ministry of Health and 20% of the

second year students, 33% of the fourth years, and 29% of the final year students had intentions for doing private practice after their specialization in orthodontics. Fifty percent of the second year students, 40% of the third years, 68% of the fourth year students, and 29% of the final year students had intentions to work in the academic field, in the Ministry of Health, and do private practice together; 10% of the second year students, 40% of the third year students, and 43% of the final year students replied that they had not yet decided on the choice of their working environment after their postgraduation in orthodontics, with the only exception of fourth year students who had already made their clear decision on the choice of working environment after their postgraduation in orthodontics. Interestingly, none of the students had intentions to work under the Ministry of Higher Education after their postgraduation in orthodontics.

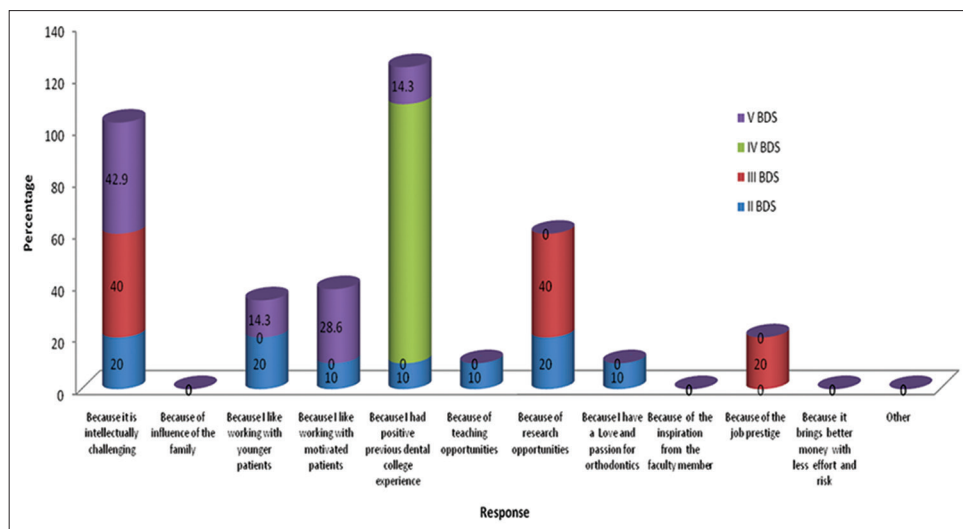
**Table 3: Why did you decide to select orthodontics as your career speciality?**

	II BDS (n=10) n (%)	III BDS (n=5) n (%)	IV BDS (n=3) n (%)	V BDS (n=7) n (%)
Because it is intellectually challenging	2 (20.0)	2 (40.0)	0 (0)	3 (42.9)
Because of influence of the family	0 (0)	0 (0)	0 (0)	0 (0)
Because I like working with younger patients	2 (20.0)	0 (0)	0 (0)	1 (14.3)
Because I like working with motivated patients	1 (10.0)	0 (0)	0 (0)	2 (28.6)
Because I had positive previous dental college experience	1 (10.0)	0 (0)	3 (100.0)	1 (14.3)
Because of teaching opportunities	1 (10.0)	0 (0)	0 (0)	0 (0)
Because of research opportunities	2 (20.0)	2 (40.0)	0 (0)	0 (0)
Because I have a Love and passion for orthodontics	1 (10.0)	0 (0)	0 (0)	0 (0)
Because of the inspiration from the faculty member	0 (0)	0 (0)	0 (0)	0 (0)
Because of the job prestige	0 (0)	1 (20.0)	0 (0)	0 (0)
Because it brings better money with less effort and risk	0 (0)	0 (0)	0 (0)	0 (0)
Other	0 (0)	0 (0)	0 (0)	0 (0)

BDS=Bachelor of dental surgery

### DISCUSSION

In the study conducted at Prince Sattam Bin Abdulaziz University Dental College, job satisfaction was an important factor in selecting orthodontics as the future specialty of choice among students. Similarly, three previous studies<sup>[9-11]</sup> conducted among orthodontic residents in USA, UK, and Saudi Arabia had shown that job satisfaction was the most common reason for selecting the specialty of orthodontics. At the Prince Sattam Bin Abdulaziz University Dental College, 7 out of the 27 students (26%) who had taken part in the study felt that this branch of dentistry was intellectually challenging, thus giving a higher response rate when compared to the rate reported in a previous study (18.21%) conducted by Noble *et al.*<sup>[19]</sup> and was



**Figure 3:** Reason to select orthodontics as a career speciality

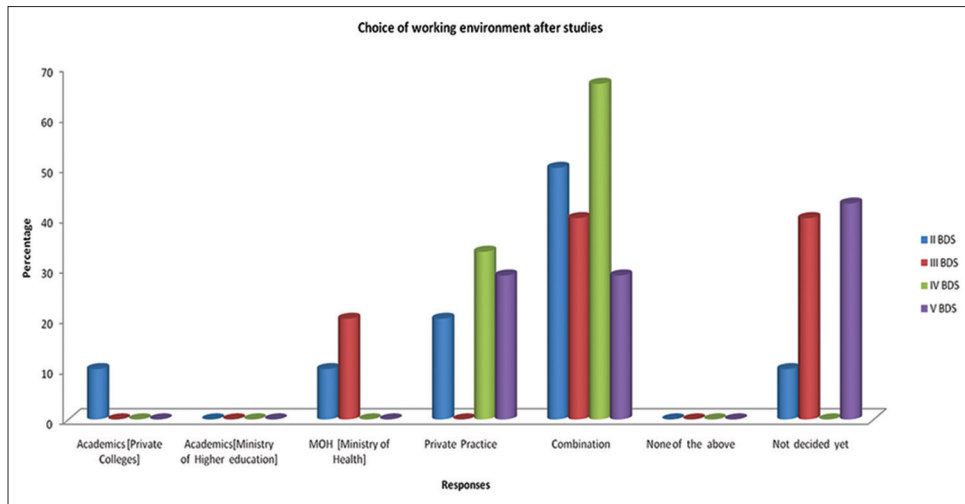


Figure 4: Choice of working environment after studies

**Table 4: Choice of working environment after studies**

	II BDS (n=10) n (%)	III BDS (n=5) n (%)	IV BDS (n=3) n (%)	V BDS (n=7) n (%)
Academics (private colleges)	1 (10)	0 (0)	0 (0)	0 (0)
Academics (Ministry of Higher Education)	0 (0)	0 (0)	0 (0)	0 (0)
MOH (Ministry of Health)	1 (10)	1 (20)	0 (0)	0 (0)
Private practice	2 (20)	0 (0)	1 (33.33)	2 (28.6)
Combination	5 (50)	2 (40)	2 (66.7)	2 (28.6)
None of the above	0 (0)	0 (0)	0 (0)	0 (0)
Not decided yet	1 (10)	2 (40)	0 (0)	3 (42.9)

BDS=Bachelor of dental surgery

approximately similar (25%) to the rate reported by Yemitan *et al.*<sup>[20]</sup> Only one student (4%) felt passionate toward this specialty, which was not similar when compared to the rate reported in the study conducted by Noble *et al.*<sup>[19]</sup> and Yemitan *et al.*<sup>[20]</sup> where the “passion for orthodontics” emerged as the most important factor (20.29% and 42.9%, respectively) influencing the decision to pursue orthodontics as a career. This observation was negligible, which presented only 4% compared to previous studies reported<sup>[12,14,21]</sup> Furthermore, our results were similar to the results of previous studies conducted by Keith in UK and USA and by Al-Hamlan *et al.* in Saudi Arabia, wherein intellectual challenge and job prestige were reported to be the most important factors influencing the residents’ choice of specialty,<sup>[16,21]</sup> even though the passion for orthodontics was very less. Noble *et al.* reported that about 48% of residents in Canada<sup>[14]</sup> and 66% of residents in USA<sup>[12]</sup> chose orthodontic specialty for monetary benefits. In the present study, none of the students opted for orthodontics because of

better monetary benefits, which was entirely different from the finding of the previous study conducted in Saudi Arabia by Al-Hamlan *et al.*,<sup>[21]</sup> wherein 25% of the Saudi residents chose orthodontic specialty for monetary benefits. This can be taken as a positive attitude among the students at Prince Sattam Bin Abdulaziz University Dental College where a greater percentage of the students had chosen orthodontics as their future specialty because they had felt that orthodontics was intellectually challenging. A “passion for orthodontics” emerged as the most important factor (20.29%) influencing the decision to pursue orthodontics as a career, followed by “intellectual stimulation or challenge.” Only 15% of the students at Prince Sattam Bin Abdulaziz University Dental College were interested in research, which should not be considered as a positive attitude when compared to the previous study conducted by Al-Hamlan *et al.*,<sup>[11]</sup> wherein almost half of the Saudi orthodontic residents (55.6%) were interested to participate in research. But this attitude is better when compared to the study conducted in Canada by Noble *et al.* who found that only 4% of the residents were interested in research and academics.<sup>[14]</sup> In the present study conducted by the author, 19% of the students preferred Private practice. This observation was not similar to values reported by Noble *et al.*<sup>[19]</sup> (89.05%) and Yemitan *et al.*<sup>[20]</sup> (39.3%) wherein most residents planned to engage in private practice. Only 7% of the students had planned to work under the Ministry of Health in spite of the fact that orthodontic treatment is provided free of cost by the government. But this policy of the government may explain the reason for why a majority of the students (41%) had made a safe preference to work under the Ministry of Health and at the same time do private practice. A future change of this policy

from the government may explain the reason for 22% of the students not making any decision on their working environment yet. Eighty percent of the students in the present study had decided orthodontics as their career of choice while they were doing their second year in dentistry, which was different from the finding of the study conducted by Nobel *et al.*<sup>[19]</sup> wherein most residents had decided to become an orthodontist before they were in dental school (44.93%). In the present study, only one of the students intended to pursue primarily an academic career, which was similar to the previous studies<sup>[19,20]</sup> wherein only two and four subjects had intended to pursue primarily an academic career.

## CONCLUSION

Majority of the students who had chosen orthodontics as their future specialty of choice at Prince Sattam Bin Abdulaziz University Dental College, Saudi Arabia had taken up this specialty because they felt that orthodontics was intellectually challenging. The present study was conducted on a limited sample size. Further studies are required in the future with larger sample size to validate the results.

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Nil.

## Conflicts of interest

There are no conflicts of interest.

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