Medical Students' Awareness of Orthodontics: A Cross Sectional Study

Dr McQueen Mendonca
Lecturer, Dept of Orthodontics
A.B.Shetty Dental College, Mangalore

Dr.Audrey Madonna D'Cruz
Reader, Dept. of Community Dentistry,
A.B.Shetty Dental College

Dr. Murali P.S.
Lecturer Dept of Orthodontics,
A.B.Shetty Dental College

Dr.CrystalRunaSoans
Lecturer,
A.B.Shetty Dental College.

Prof.(Dr) U.S. Krishna Nayak
Principal and HODDept of Orthodontics
A.B.ShettyDental College,Mangalore

Abstract

The purpose of this study was to assess the awareness and attitudes of medical students with regard to the subject of Orthodontics. Considering the fact that today's medical students will be tomorrow's medical practitioners, they would probably encounter patients with various malocclusions or dentofacial defects, who would not have an esthetically pleasing profile. Hence it was considered pertinent to assess their level of awareness.This cross sectional study was conducted among the first yearMBBS students at the K.S.Hegde Medical Academy, Mangalore. 132 students participated in the survey. A validated questionnaire was distributed among the students. Descriptive statistics, i.e., number and percentage was used to describe the variables. There was a difference between male and female students' awareness and their attitudes towards orthodontics.While there is scope for conducting similar studies in future, it was concluded in this study that medical students had average awareness of orthodontics as a sub-specialty of dentistry.A basic introduction to dental sub-specialties would help them identify dentofacial problems and make appropriate referrals. Orthodontists for their part could improve their communication skills and allay patient fears about treatment discomfort.

Introduction

The term 'malocclusion' means malposition of teeth and incorrect relation between the upper and lower arches and teeth. Patients with malocclusion have no specific complaints, but may mention about their looks, difficulty with pronunciation of certain words, and mastication1. Because malocclusion is often conspicuous, it might lead to adverse social reactions and a deficient self-concept2.Occlusal corrections have been shown to improve body image of dental and facial features3. Today, there is increasing demand for orthodontic treatment in society4.This can be due to increasing awareness of malocclusion, treatment availability, importance given to esthetics and facial appearance5. Results of psychosocial attractiveness research suggest that the perception of one's own physical appearance is often associated with concerns about other people's reactions and a negative body concept6. Orthodontic conditions are often considered to be of lesser importance by most health professionals as they are not considered as life threatening conditions1. However, the early treatment of malocclusion is important because it affects quality of life7. Medical practitioners have an important role to play for patients with a vast majority of health-related complaints as they are the primary care givers.Involvement of medical practitioners in the process of screening, detection and referral of patients with oral health problems including malocclusion will be beneficial for the prevention and management of oral diseases, and effective delivery of oral health care 8. Considering the fact that today's medical students will be tomorrow's medical practitioners, it was considered pertinent to assess their level of awareness of the subject of orthodontics and their perceptions about the subject, by having them fill up a questionnaire. This study would also provide a useful insight into the attitudes of today's medical students towards orthodontics. The objective of this study was to assess the awareness and attitudes of medical students with regard to the subject of Orthodontics.

Materials And Methods

This cross sectional study was conducted among the first year MBBS students at the K.S.Hegde Medical Academy, Mangalore. One hundred thirty two students participated in the survey. A questionnaire used by Al Shahraniet al8(Table 1) was distributed among the students. Prior permission from the concerned authorities and informed consent from the participants was taken. The students were informed of the objective of the survey, and were given instructions on how the forms were to be filled. Implied coercion was done away with as none of the authors were involved in classroom teaching. It was ensured for completeness of the questionnaire while collecting it back. All forms were collected after 15 - 20 minutes.

Data collected was entered on Microsoft Excel. The statistical software package SPSS version 16.0 for Windows was employed for data analysis. Pearson's Chi square test was used and a p value less than 0.05 were considered statistically significant.

Results

A total of 132 students participated in the survey. 55 were males and 77 were females. The age range of the participantswas 17 – 22 years, with a mean of 18.45 + 0.8 years. Table 2 and Graph 1 describethe socio-demographic details of the participants.

Descriptive statistics, i.e., number and percentage was used to describe the variables.This has been summarized in Table 3. Only 40.15% of the participants (n=53)had visited a dentist in the last 6 months (Graph 2). 80.3% respondents (n=106) were familiar with the term Orthodontics. (Graph 3). Close to 44% of the students felt esthetics was most affected by malocclusion (n=58). This was followed by mastication 47.72% (n=63), and speech 8.33% (n=11). There was adifference between male and female students' awareness and their attitudes towards orthodontics.

Discussion

The general purpose of the present study was to assess the first year medical students' awareness of Orthodontics and their attitudes towards the mentioned specialty.A validated questionnaire was used. Medical College students' exposure to the subject of dentistry is very minimal, let alone the field of Orthodontics. As tomorrow's medical practitioners they would probably encounter patients with various malocclusions or dentofacial defects, who would not have an esthetically pleasing profile. Hence this study was conducted to assess the students.

About 40.15% (n=53) of the participants had visited a dentist in the last 6 months and 59.84% (n=79) had not visited a dentist. This percentage is in contrast to a study which reported that 74% of the respondents visited a dentist (8). Of the 40%respondents who visited the dentist, 13.2%(n=7) visited with complaints of pain, 58.49% (n=31) went for routine checkup and 28.3% (n=15) had other complaints.

Close to 80% (n=106) of the students were familiar with the term orthodontics. This could be due to the fact that the medical college students have basic knowledge about the dental specialty, since the medical college has an adjoining dental college. Also the fact many medical college students seek orthodontic treatment in the adjoining dental college has probably led to increasing awareness. This is in contrast to a similar study which reported that only 50% of the students were familiar with the term orthodontics8.

About 74% (n=98) of the students could identify correctly the treatment procedure carried out by the orthodontist. 26% (n=34) identified wrongly dentures and fillings as procedures carried out by the orthodontist. This finding suggests that the medical students need to be better updated with the various sub-specialties in the field of dentistry.

It was observed that 34% (n=45) of the respondents were undergoing or had undergone orthodontic treatment previously. 63% (n=83) respondents had relatives undergoing/undergone orthodontic treatment. This data suggests that despite the respondents or their relatives receiving treatment their perception of orthodontics was not completely correct.

There was a difference among male and female students response regarding which daily function would be most affected by malocclusion. Of the 55 male participants, 34.54%(n=19) felt aesthetics was most affected, while 50.64% (n=39) of the 77 female participants felt aesthetics was most affected. This data suggests that the female participants consider aesthetics to be more affected than mastication or speech. These findings are similar to similar studies conducted in Nigeria 1 and Saudi Arabia8.

The findings of a study9 conducted to observe professional opinions on the advantages of orthodontic treatment also states that both general dentists and orthodontists rated the psychosocial gain from orthodontic treatment higher than the dental gain. They also felt that orthodontic treatment reduces the chances of dental disease. The data from our study also suggests that aesthetics may be a motivation for seeking treatment, especially for female patients.

A majority (94.69%) of the respondents (n=125) said that they would refer their close relatives to dentists if they noticed maligned teeth. This is in contrast to a similarly conducted study8 which reported that only 56% of the respondents said that they would consider referring close relatives with malocclusion to a dentist. The study8 has mentioned the need for creating more orthodontic awareness among medical students.

With regard to deterrence from advising or personally undergoing orthodontic treatment, both male and female participants (n=58) felt treatment discomfort was a bigger deterrent (43.94%) compared to treatment cost 34.84% (n= 46). The time required was the least deterrence for the respondents 21.21% (n=28). This finding suggests that orthodontists should advise patients about the various appliances available for orthodontic treatment. Communication between the orthodontist and the patient regarding diagnosis and treatment planning is very important, as has been noted in an article 10 which states that patients and parents are often amused to know that there is more than one proper treatment plan for any case.

It was observed that 69.69% (n=92) of the respondents mentioned that they would suggest orthodontics as a career to their close relatives, whereas 30.3% (n=40) would not suggest so. Patients could be explained the benefits of orthodontic treatment. It has been mentioned in various studies 6 ,11 that patients who have completed orthodontic treatment may benefit in their dental compliance and oral health indirectly by psychological factors6. Also they have an improved oral health-related quality of life than did the untreated patients who were waiting for treatment 11.

Very few studies have been conducted to assess the medical students' awareness of orthodontics. The limitation of this present study was a limited sample

size. There is a scope for further studies of similar nature to be conducted in future. In spite of the limitations of the present study, the findings are useful for the orthodontic profession and also the fact this study facilitates for a debate in the medical community as to the amount of awareness the medical students must have about the sub-specialties of dentistry.

Conclusion

The medical students had average awareness of orthodontics as a sub-specialty of dentistry. A basic introduction to dental sub-specialties would help them identify dentofacial problems and make appropriate referrals. Orthodontists can improve their communication skills and allay patient fears about treatment discomfort

Acknowledgements

The author would like to thank the medical college deanDr.Satish Kumar Bhandary, the Head, Department of Anatomy, Dr. Martin Lucas, and all the first year MBBS students of K.S.Hegde Medical Academy, Nitte University, Mangalore for their participation in the study. Also special thanks to Dr. Ibrahim Al Shahrani, Dean, King Khalid University, Saudi Arabia, for his permission to use his questionnaire

Table 1

Pre-piloted validated self-administered questionnaire

Please tick the appropriate circle.

Age: years Gender: M □ F □

1. Have you visited a dentist in the last 6 months □
   Yes □ No □
2. If yes, what was your reason for visiting the dentist □ Pain □ Routine checkup □ Other □
3. Are you familiar with the term Orthodontics □
   Yes □ No □
4. Do you know which type of treatment is done in the orthodontic specialty □
   Dentures □ Fillings □ Correcting crooked teeth □
5. Are you receiving orthodontic treatment at present or underwent orthodontic treatment previously □
   Yes □ No □
6. Are any of your relatives receiving orthodontic treatment presently or have undergone orthodontic treatment previously □
   Yes □ No □
7. In your opinion, which daily function would be most affected by maligned and crooked teeth □
   Aesthetics □ Mastication □ Speech □
8. Will you refer your close relatives to dentists in case you notice maligned teeth □
   Yes □ No □
9. Of the following, what would deter you from advising or personally undergoing orthodontic treatment □
   Cost □ Time required □ Treatment discomfort □
10. Would you suggest orthodontics as a career to any of your close relatives □
    Yes □ No □

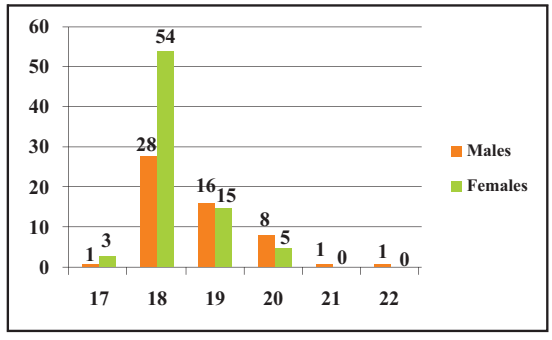
Table 2: Socio-demographic characteristics of study population

Age In years	Males	Females	Total
17	1	3	4
18	28	54	82
19	16	15	31
20	8	5	13
21	1	0	1
22	1	0	1
Total	**55**	**77**	**132**

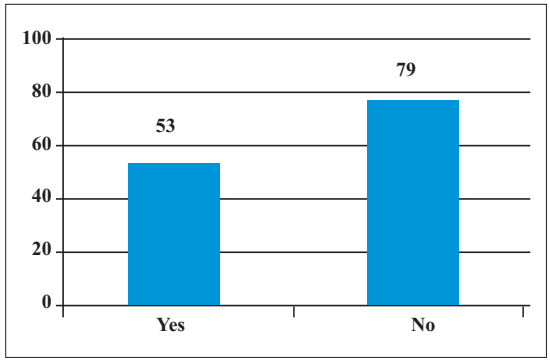
Table 3: Descriptive statistics of the variables in the study

Question		Males No (%)	Females No (%)	Total No (%)	Chi square	P value
1. Have you visited a dentist in the last 6 months?	Yes	16(29.09)	37(48.05)	53(40.15)	4.80	0.028*
	No	39(70.91)	40(51.94)	79(59.84)		
2.If yes, what was your reason for visiting the dentist? (n=53)	Pain	2 (12.50)	5(13.51)	7(13.20)	0.1	0.952
	Routine check up	9 (56.25)	22(59.45)	31(58.49)		
	Others	5 (31.25)	10(27.03)	15(28.30)		
3. Are you familiar with the term Orthodontics?	Yes	41 (74.54)	65(84.41)	106(80.30)	1.98	0.160
	No	14 (25.46)	12(15.58)	26(19.69)		
4.Do you know which type of treatment is done in the orthodontic specialty?	Dentures	5 (9.09)	10(12.98)	15(11.36)	0.808	0.668
	Fillings	7 (12.72)	12(15.58)	19(14.39)		
	Correcting crooked teeth	43 (78.18)	55(71.43)	98(74.24)		
5.Are you receiving orthodontic treatment at present or underwent orthodontic treatment previously?	Yes	14 (25.45)	31(40.26)	45(34.09)	3.13	0.077
	No	41 (74.54)	46(59.74)	87(65.90)		
6. Are any of your relatives receiving orthodontic treatment presently or have undergone orthodontic treatment previously?	Yes	32 (58.18)	51(66.23)	83(62.87)	0.891	0.345
	No	23 (41.81)	26(33.76)	49(37.12)		
7. In your opinion, which daily function would be most affected by maligned and crooked teeth?	aesthetics	19 (34.54)	39(50.64)	58(43.94)	6.46	0.040*
	mastication	28(50.9)	35(45.45)	63(47.72)		
	speech	8(14.55)	3(3.9)	11(8.33)		
8. Will you refer your close relatives to dentists in case you notice maligned teeth?	Yes	53(96.36)	72(93.5)	125(94.69)	0.522	0.470
	No	2(3.63)	5(6.49)	7(5.30)		
9. Of the following, what would deter you from advising or personally undergoing orthodontic treatment?	cost	19(34.54)	27(35.06)	46(34.84)	0.02	0.990
	time required	12(21.81)	16(20.78)	28(21.21)		
	treatment discomfort	24(43.63)	34(44.15)	58(43.94)		
10. Would you suggest orthodontics as a career to any of your close relatives?	Yes	37(67.27)	55(71.43)	92(69.69)	0.262	0.609
	No	18(32.72)	22(28.57)	40(30.30)		

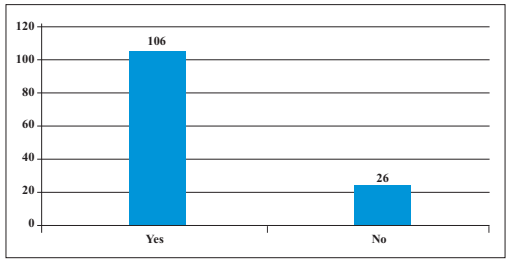
Graph 1: Age of the participants and frequency



Graph 2. Respondents who visited/didn't visit the dentist in the last 6 months



Graph 3. Participants familiar/not familiar with the term Orthodontics



References

References are available on request at editor@healtalkht.com