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Reasons for seeking orthodontic treatment in Jammu region: A questionnaire based survey

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Abstract

Introduction: A desirable outcome in any treatment is patient's utmost expectation. The reasons for opting Orthodontic treatment by patients is an area of research as taking into account the reasons for seeking this treatment increases the chances for better and satisfying results. The present study was conducted to determine the reasons for seeking Orthodontic treatment by patients reporting to a tertiary care dental teaching institution in Jammu region.

Material and Methods: This was a questionnaire based survey performed done in the department of Orthodontics. The total sample size was 360 patients who were reporting for Orthodontic treatment to Department Of Orthodontics. All the patients were told to fill a structured questionnaire related to various reasons for seeking Orthodontic treatment. The questionnaires were given to them as hard copy. The filled questionnaires were collected and responses were tabulated and sent for statistical analysis.

Results: Majority of the patients were motivated by dentist/physician/speech therapist/plastic surgeon / ENT specialist/others (83.3%) for seeking the orthodontic treatment. 75% patients believed that orthodontic treatment will improve their overall dental health. A vast majority of the patients (95.2%) patients believed that orthodontic treatment will bring improvement in social and psychological well being. Most (45.2%) were not aware of the role of Orthodontic treatment in improvement of mastication. 41.4% patients believed that after the treatment it will be easy to find a job. Many (71.8%) patients were seeking orthodontic treatment for matrimonial purpose.

Conclusion: The reason for seeking Orthodontic treatment by majority of the patients was, dental correction and expectation of a positive social and psychological impact after the treatment as well for matrimonial reasons. Most of the patients were not sure about the other oral health related conditions resulting from Orthodontic treatment like improvement in face, speech, mastication. Though majority of the patients were self-motivated. There is a need of more patient education about the benefits and needs of Orthodontic treatment in Jammu region.

Keywords: Improvement in face, speech, mastication

Introduction

The increasing awareness about general oral health has led to increase in seeking orthodontic treatment as well. Orthodontic treatment in general was considered mainly for aesthetics/cosmetic purposes earlier but with the changing perception towards health care and allies one can see a paradigm shift where patients have started thinking about the aspects of orthodontic treatment in terms of general oral health which includes problems related to speech, occlusion, periodontium, bite etc which, could result in a good functioning and aesthetically pleasing dentition in harmony with the face^[1].

The main role in seeking Orthodontic treatment is played by parents, peer group influence, Dentists^[2-4]. Apart from these, the other factors that affect patients perception about seeking Orthodontic treatment are Demographic background of a patient such as gender, age, socio-economic status, familiarity of Orthodontic appliance may also affect patient's perception to Orthodontic treatment^[5].

Frequently listed individual Orthodontic treatment reasons are self-concept, self-image, status, pride, discomfort and concern for future oral health care^[6]. Studies have found out that awareness and desire to receive orthodontic treatment might vary with age^[7] and that decrease in satisfaction with dental appearance is associated with increasing age^[8].

Orthodontists’ knowledge of the patient’s motivation to seek Orthodontic treatment is a critical aspect. It helps in formulating treatment plan that is most valid for the patient [9]. Apart from it, guidance on how to approach Orthodontic patients effectively and motivate them to cooperate with Orthodontic treatment can also be sought from data obtained from such studies. There is a literature gap in reasons for seeking Orthodontic treatment in Jammu region. The present questionnaire survey was conducted to determine the reasons and the factors bringing the patients to seek Orthodontic treatment in a tertiary care teaching dental institution of Jammu region.

Materials and Methods

This study was performed in department Of Orthodontics over a period of three months and was a quasi experimental type of a survey which included pre structured questionnaires given to patients in age group of 15 to 22 reporting for Orthodontic treatment to Department of Orthodontics, Indira Gandhi Government Dental College & Hospital, Jammu. The total sample size was 360 which included 150 males and 210 with the following inclusion and exclusion criteria:

Inclusion criteria

1. Subjects who are willing to participate in study.
2. Those who will be able to understand the questionnaire in

its true perspective.

3. Patients reporting for Orthodontic treatment.
4. Patients in age group of 17-24.

Exclusion criteria

1. Subjects who are not willing to participate in the study.
2. Patients unable to understand the questionnaire in its true perspective.
3. Patients with previous history of Orthodontic treatment.

This study was conducted over a period of six months. The pre structured questionnaire (Fig 1) was consisting of 10 questions with three choices each (yes/no/maybe) and patients were instructed to tick mark one choice. The questionnaire was validated by three Orthodontists and finally 10 questions were kept in the final draft of the questionnaire.

A junior resident accompanied each patient and explained about the study and the method of filling the questionnaire which was supplied as hard copy. Each patient was provided 10 minutes to complete the questionnaire in a quite room. All the questionnaires were collected back and kept in secret ballot. Proxy consents were taken from patients parent as well where the patient hadn’t attained the adult age. All the entries answered by the patients were tabulated in excel sheet and sent for statistical analysis.

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Title of Study : Reasons for seeking Orthodontic treatment in Jammu: A Questionnaire study

Name: _____ Age(D.O.B): _____
 Email: _____ Address: _____
 OPD: _____ Gender: _____

Tick any one of the responses for each question which you feel is appropriate according to you opinion which bought you for Orthodontic treatment.

1. My parents/siblings/peer group have motivated me for the treatment? YES/NO/MAYBE
- 2.I have been sent by dentist/physician/speech therapist/plastic surgeon/ENT specialist/others, for the Orthodontic treatment? YES/NO/MAYBE
3. Braces treatment will improve my overall dental health? YES/NO/MAY BE
4. Braces treatment will improve my facial appearance? YES/NO/MAY BE
5. Braces treatment will decrease the tendency for other dental disease? YES/NO/MAY BE
6. Braces treatment will improve my speech? YES/NO/MAY BE
- 7.Orthodontic correction of my teeth will improve my social and psychological well- YES/NO/MAY BE
8. It will improve my mastication? YES/NO/MAY BE
- 9.Orthodontic Correction of my teeth will help me in future to find a better job? YES/NO/MAYBE
- 10.My main reason for Correction of teeth with braces is Matrimonial purpose? YES/NO/MAY BE

CONSENT: I have been informed and explained about the purpose of research being carried out in the department of orthodontics. I have been explained all the potential benefits and risks associated and my identity remaining confidential in the study. I am also aware of my rights to withdraw from the study at any point of time without giving reasons for doing so. I have understood aforesaid. I am not under any pressure and not forced by anyone and not aided financially to be part of study. Hence, I give my consent to participate in the study.

Signature of patient: _____ Date: _____
 Signature of witness: _____

Fig 1: Questionnaire given to patients for marking response

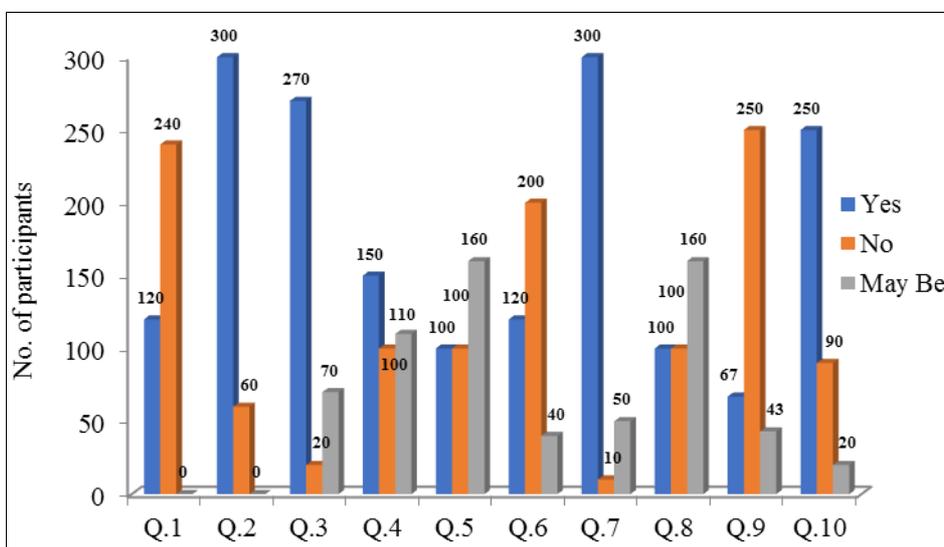
Results

A total of 360 completed questionnaires were included in the analysis. Results were analysed. The percentage wise result was obtained of the overall responses as well as male and female subjects reporting for Orthodontic treatment as shown in Table 1 & Graph 1.

Majority of the participants were motivated by dentist/physician/speech therapist/plastic surgeon / ENT specialist/others (83.3%) for seeking the orthodontic treatment. 66.7% of the patients were self-motivated with majority of female subjects. 83.33% of total patients were referred and 16.7% had reported of their own. 75% agreed that overall health will be improved by the orthodontic treatment mostly females (81%) than males (66.7%). 41.7%agreed that Orthodontic treatment will improve facial appearance mostly females (47.6%). 30.5% of the overall subjects were not sure of Orthodontic treatment improving their facial appearance.44.4% responded with may be for the Orthodontic treatment decreasing the tendency for Other dental disease with mostly females. Regarding speech 55.6% said no to improvement of speech with Orthodontic treatment, Males responded 70% No and females 33.3%. Regarding social and psychological well-being 83.3% said yes with

95.2% females agreeing to this. Regarding mastication 44.4% said May be while as there was equal response with yes/ no in male and female population. For Job purpose 69.4% said No, while as 41.4% females said yes to Orthodontic treatment for Job purpose. 69.5% of the total patients agreed to the Orthodontic treatment for matrimonial purpose with 71.4% females and 66.7% males.

A significantly greater proportion of females compared to males believed that orthodontic treatment will improve their overall dental health (p value <.05). A significantly greater proportion of females compared to males believed that orthodontic treatment will improve their facial appearance (p value <.05). The proportion of males believing that orthodontic treatment will decrease tendency for other oral diseases was significantly greater compared to the proportion of females believing so (p value <.05). The proportion of females believing that orthodontic treatment ‘improves speech’ and ‘improves social and psychological well-being’ was significantly greater compared to the proportion of males believing so (p value <.05). Responses to remaining questions were not found to differ significantly between males and females (p value >.05).



Graph 1: Bar Graph showing the percentage wise responses

Table 1: Showing percentage wise responses for seeking Orthodontic treatment in male and female patients.

Question	Response	MALE (n=150)		FEMALE (n=210)		TOTAL (n=360)		CHI-Square Value	DF	P-Value
		Number of participants	Percentage of participants	Number of participants	Percentage of participants	Number of participants	Percentage of participants			
My parents/siblings/peer group has forced/motivated for the treatment?	Yes	50	33.3%	70	30.0%	120	33.3%	.000	1	1.000
	No	100	66.7%	140	70.0%	240	66.7%			
	May be	0	0.0%	0	0.0%	0	0.0%			
I have been sent by dentist/physician/speech therapist/plastic surgeon/ENT specialist/others, for the treatment?	Yes	130	86.7%	180	85.7%	300	83.3%	.066	1	.797
	No	20	13.3%	30	14.3%	60	16.7%			
	May be	0	0.0%	0	0.0%	0	0.0%			
It will improve my overall dental health?	Yes	100	66.7%	170	81.0%	270	75.0%	13.524	1	.001*
	No	15	10.0%	5	2.3%	20	5.5%			
	May be	35	23.3%	35	16.7%	70	19.5%			
It will improve my facial appearance?	Yes	50	33.3%	100	47.6%	150	41.7%	65.994	1	.001*
	No	75	50.0%	25	11.9%	100	27.8%			
	May be	25	16.7%	85	40.5%	110	30.5%			
It will decrease the tendency for other dental disease?	Yes	52	34.7%	48	22.9%	100	27.8%	26.110	1	.001*
	No	55	36.7%	45	21.4%	100	27.8%			
	May be	43	28.7%	117	55.7%	160	44.4%			

It will improve my speech?	Yes	35	23.3%	95	45.3%	120	33.3%	65.252	1	.001*
	No	105	70.0%	70	33.3%	200	55.6%			
	May be	10	6.7%	45	21.4%	40	11.1%			
It will improve my social and psychological well-being?	Yes	100	66.7%	200	95.2%	300	83.3%	52.306	1	.001*
	No	7	4.7%	3	1.5%	10	2.8%			
	May be	43	28.6%	7	3.3%	50	13.9%			
It will improve my mastication?	Yes	40	26.7%	60	28.6%	100	27.8%	.643	1	.725
	No	45	30.0%	55	26.2%	100	27.8%			
	May be	65	43.3%	95	45.2%	160	44.4%			
It will help me in future to find a better job?	Yes	60	40.0%	87	41.4%	67	18.7%	.294	1	.863
	No	60	40.0%	80	38.1%	250	69.4%			
	May be	30	20.0%	43	20.5%	43	11.9%			
Matrimonial purpose?	Yes	100	66.7%	150	71.4	250	69.5%	1.143	1	.565
	No	40	26.7%	50	23.8%	90	25.0%			
	May be	10	6.7%	10	4.8%	20	55.5%			

Discussion

The present study was done to know the reasons for seeking Orthodontic treatment among the patients in Jammu region reporting to the department of Orthodontics. Jammu is another division of J&K and the population is diverse having varied ethnic, cultural, economic backgrounds. In the present study the female patients were on the higher side as compared to male patients which is in alignment with the study ^[4] showing females patients seeking more dental treatment. This study revealed that most of the patients were self motivated and not influenced by any peer groups but at the same time have been referred by the doctors of other specialities indicating the less awareness about the Orthodontic treatment in the region. mostly. A study ^[10] revealed that the patients were seeking Orthodontic treatment at the advice of relatives and friends with only a few seeking treatment through the recommendation of dentists ^[10].

The knowledge about the effects of Orthodontic treatment on overall dental health was fair enough among both male and female subjects which is in alignment with the study which found that regular dental attendance pattern of patients was related more with dental appearance leading to higher demand for orthodontic treatment ^[2]. Lew ^[4] and Baldwin ^[11] in his study also found that the enhancement of dental appearance is considered to be the most important factor in seeking Orthodontic care amongst a sample of Singaporean patients.

However the response for effect of Orthodontic treatment on face, was very less among all the patients in both the genders which is quite contrary to the results of the study ^[12] which indicated that the desire to have an improved facial appearance by orthodontic treatment was found to be high.

The reason of speech, other dental disease, mastication for seeking Orthodontic treatment was very less among all the patients in both the genders which is in alignment with a study done in Saudi Arabia, where only 1% of respondents reported for seeking orthodontic treatment were owing to difficulty in mastication ^[13]; however, this is contrary to the studies done in other parts of the world that found eating and chewing to be strong functional reasons for seeking Orthodontic treatment ^[14, 15].

In the present study, Orthodontic treatment improving one's social and psychological well being was overall answered positively by both genders but mostly by the female patients which is in agreement with the results of the study ^[16] which revealed that Social and psychological impact of malocclusion may develop the desire for Orthodontic treatment.

The response for undergoing Orthodontic treatment for finding a better job was answered in negative by majority of the subjects which is in alignment with a study ^[17] which

revealed that the career opportunities as a result of Orthodontic treatment was lower down in the list of patients expectations. This reason in the present study could be attributable to inability to anticipate the benefits of Orthodontic treatment.

The reasons for undergoing Orthodontic treatment for matrimonial reasons was answered positively by majority of the participants mostly female subjects and this was the most popular reason for seeking Orthodontic treatment which is in alignment with the study by Rahman *et al.* ^[18] and Acharya ^[19] who stated marriage as the major cause for seeking Orthodontic treatment.

The limitation of the present study was the convenient sample designing as this was a cross sectional study. More such studies should be done to determine the preferences of the patients in seeking Orthodontic treatment which can keep the local Orthodontist abreast about the patient reason for taking up Orthodontic treatment.

Conclusion

Majority of the subjects including male and females wanted to opt for Orthodontic treatment for dental correction mainly for matrimonial social and psychological reasons. Most of the subjects were referred by other doctors for Orthodontic treatment showing less awareness about the speciality of Orthodontics in Jammu region. Speech, mastication were not the main reasons for seeking Orthodontic treatment.

This study also revealed very less knowledge about the benefits of Orthodontic treatment like, speech, mastication, tendency for other dental diseases related to malocclusion among the patients seeking orthodontic treatment in Jammu region. In metropolitan cities of India, may be the dental esthetics for finding a good job is a priority but that didn't seem so in Jammu region as depicted by the results of the present study.

Conflict of Interest

Nil

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Nil

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