

PATIENT AND PARENT MOTIVATION FOR ORTHODONTIC TREATMENT

Nayab Hassan, Ghulam Rasool, Aneela Nausheen, Samia Rahman, Tahira Hussain

Khyber College of Dentistry, Peshawar

ABSTRACT

Objective: The aim of this study was to determine patient and parents/guardian motivation for seeking orthodontic treatment and the influence of age and gender.

Material and Methods: The sample comprised 92 subjects divided into three groups ;aged ranged from 7–10 years, 11–18 years and 19–30 years. All participants completed same questionnaire, designed to assess motivation for orthodontic treatment. Statistical analysis was done using SPSS version 20.0. Pearson's chi-square test were applied for comparing motivational factors among gender and three age groups.

Results: In this sample , the desire to improve aesthetics was the main motivational factor for undergoing orthodontics treatment. With increasing age, patients were more aware of their malocclusion. The motivation for treatment decreased with increasing age due to peers and surroundings. Ten percent of older patients were motivated by future improvements in health & only 5 per cent of the examined subjects started treatment because other children made fun of them. Influence of parents on patients decreased with increasing age. No statistically significant difference by gender or age of the children was found.

Conclusions: Improvement in dental aesthetics was the principle motivational factor for the adolescents (48 per cent), their parents/guardians (17 per cent), and adult patients (34 per cent) seeking orthodontic treatment.

Key words: Motivation, orthodontic treatment, malocclusion

INTRODUCTION

Internal motivation is key to success in orthodontics therapy. Patient compliance is depended on internal motivational. Orthodontic treatment aims is to improve occlusion, achieve good function and enhance aesthetics^{1,2}. A number of factors and reasons bring patients to an orthodontist but aesthetics especially alignment of anterior teeth often is the primary one^{1,3-5}. Improvement of facial appearance seems to be an important determinant of self and social perceptions and motivating factor for seeking orthodontics treatment^{6,7}. Some individuals with dentofacial disharmonies seeking treatment experience a level of psychological distress that may warrant psychological/psychiatric intervention as well. A desire for seeking professional treatment by orthognathic patients may be due to problems in biting and chewing, temporomandibular disorders, and headache⁶.

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Gender, age, intellectual level, social class, severity of malocclusion, dental care, Self perception, self-image, status, pride, discomfort, referral by general dentist and concern for future oral health care have also be found to be associated to be the reason for seeking orthodontic treatment^{1,8-11}. The influence of these factors depends on the cultural and social characteristics of each subgroup of the population^{12,13}.

On one hand, objective epidemiological studies find few sex differences in the incidence or severity of malocclusions¹²⁻¹⁵. In contrast, orthodontic patients consist of roughly twice as many girls as boys. An obvious inference is that girls (and their financially responsible parents) are appreciably more sensitized to Occlusal issues compared to boys^{16,17}. Several studies of unselected children report that adolescent girls tend to be more critical of their occlusion than boys^{18,19} and, interestingly, this sex difference extends to the percentage of parents who are more critical and more concerned about their daughter's malocclusion than

Correspondence:

Dr. Nayab Hassan

Resident FCPS II

Department of Orthodontics, Khyber College of Dentistry

Cell: 0321-9117048

Email address: nayabhassan44@gmail.com

that of their son^{8,16}.

A successful orthodontic treatment depends on variety of factors, although the knowledge and skills of clinician remain significant the motivation, attitude of patients and parents in case of children immediately before and during the treatment plays a major role in achieving the desired treatment results^{20,21}. Patient cooperation is an essential factor in the timely, successful outcome of orthodontic treatment. A lack of cooperation with treatment has a significant effect on the length of treatment²⁰. A patient with poor compliance will substantially limit the quality of orthodontic treatment²². Understanding the factors involved in the demand for orthodontic treatment in a particular population enables a better planning of resources as well as a better assessment of treatment needs and priorities⁸.

The aim of this study was to determine; patients and their parents/guardian's reasons for seeking orthodontic treatment, and analyze the reasons for orthodontic treatment in relation to age and gender, and to determine the influence of specialists and parents in motivating patients.

METHODS AND MATERIALS

This cross-sectional descriptive, and questionnaire-based study was carried out between March 2014 and August 2015. The patients were recruited from the Department of Orthodontics of Khyber College of Dentistry. Study protocol was explained to the participants of the study after getting written informed consent. Ninety-two patients and parents of children were evaluated using the same questionnaire. The subjects were divided into three groups on basis of age i.e. 7-10years, 11-18years group (adolescents) and 19-30 years group (adults).

Mentally handicapped, psychologically ill and patients with craniofacial syndromes or anomalies were excluded from the study. Patients completed a questionnaire, which contained nine items on motivation for starting treatment. The parents/guardians of children completed a similar questionnaire. The subjects could, if applicable, select more than one answer to each question.

The data was analyzed using SPSS 20.0. Mean and standard deviation was calculated for numerical variable like age. Percentages and frequencies were calculated for categorical variable like gender, reasons for orthodontic treatments etc. To determine any influence of the patient's age and/or gender, Pearson's chi-square test was used for comparing motivational factors by genders and age groups. $P < 0.05$ was considered significant.

RESULTS

A total of 92 patients were included in the study of which 44 (47.8%) were males and 48 (52.2%) were females. The mean age was 16 ± 2.8 years. The details of gender distribution are given in table 1. The most common age group was 11-18 years (Table 1)

Aesthetics was found to be the main reason for the participant's decision to present for orthodontic treatment. Among chief complaints 56.58 % patients main concern was to improve their look, out of which 30 were females & 22 were males (Table 2). There was

Table-1: Age distribution

Age group(years)	n	%
7-10	22	23.9
11-18	41	44.6
19-40	29	31.5
Total	92	100.0

Table-2: Reasons for seeking orthodontics treatment by genders

Reasons for seeking Orthodontics treatment	Male		Female		Total		P-value
	n	%	n	%	n	%	
Malocclusion	10	20.8	6	13.6	16	17.39	0.125
Esthetic	22	45.8	30	68.18	52	56.58	
Referral	5	10.4	4	9.09	9	9.79	
Peer pressure	4	8.33	1	2.27	5	5.5	
Function	7	14.5	3	6.81	10	10.86	
Total	48	100	44	100	92	100	

Table-3: Reasons for seeking orthodontics treatment by age group

A g e group	Reasons for seeking Orthodontics treatment										Total		P-value
	Malocclusion		Esthetic		Referral		Peer pressure		Function				
7-10	6	27.27	9	40.9	3	13.63	3	13.63	1	4.5	22		.148
11-18	7	17.07	25	60.97	4	9.7	2	4.8	3	7.3	41		
19-40	3	10.34	18	62.06	2	6.8	0	0	6	20.68	29		
Total	16	17.39	52	56.52	9	9.7	10	5.4	10	10.86	92		

Table-4: Reasons for seeking orthodontics treatment by self or parent stratified by age group

Motivation factors	Age group						Total		P-value
	7-10		11-18		19-40				
Patient	0	0	24	26.08	21	22.8	45	48.9	0.000
Parent	16	17.3	6	6.52	1	1.08	23	25	
Both	6	6.52	11	11.9	7	7.6	24	26.08	
Total	22	23.9	41	44.5	29	31.5	92	100	

no statistical difference among gender in reasons for presenting to orthodontics treatment.

With increasing age the number of patients presenting for orthodontics treatment was increased. This phenomena was well marked for esthetics. (Table 3).

The influence of parents/guardians on the patient decision to undergo orthodontic treatment decreased with patient age as shown in Table 4. Below age 10, parents were the motivational factors for orthodontics treatment. With increasing age, the internal motivation was increased.

DISCUSSION

Motivation of the patient is necessary for an excellent orthodontic treatment. It is necessary to know what does the patient expect as a result of treatment and how enthusiastic the patient is likely to be. Motivation is of two types: internal motivation-individual desire to correct a defect that he perceives in himself and external motivation- pressure from others. Encouragement from peer group is also extremely important for patient to undergo treatment²³.

The current study found that parent's motivation level for their child to have orthodontic treatment was significantly greater than their children. These results were in conformity with previous studies. Daniels²⁰ also reported parents as the primary motivating factor in children. Some other studies have shown that the need for treatment was perceived greater by the mother than children and is the most significant decision maker in

initiating orthodontic treatment^{14,24-26}. According to Birkeland²⁷ and Kiyak⁹ 75 percent of parents/guardians were dissatisfied with the appearance of their children, of which 54 per cent wanted their children to undergo treatment.

The present study also found that 9% of parents/guardians brought their child to orthodontic office because they were referred by dentists or other doctors. However, this influence decreased significantly with increasing age of the children. The adolescent group mostly made an independent decision to undergo treatment. Similar findings were noted by Trulsson et al²⁶.

The current study found that the primary motivating factor for seeking orthodontic care is aesthetics and that dissatisfaction with appearance, which increased with age. Adolescents are very much concerned about physical attractiveness to gain social acceptability. Therefore, the desire to have an improved facial appearance by orthodontic treatment was found to be high in the group. Ingervall & Hedegard¹⁸ found that awareness and desire to receive orthodontic treatment might vary with age. The results were also in line with the work carried out by Shaw⁴ and Birkeland et al²⁷ who stated that decrease in satisfaction with dental appearance is associated with increasing age.

Majority of females in this study demonstrated more concern for appearance (56 percent) than males (44 percent), which correspond with the findings of previous studies^{9,16}. Girls tend to be less satisfied with their occlusions and place greater importance on the

need for and value of orthodontic treatment²⁸.

We found that girls reported greater willingness & motivation to carry out orthodontic treatment than did boys which was in conformity with previous research work^{22,23}. Also parents of girls were more concerned about the aesthetics than boys. It seems likely that traditional sex roles cause girls to be more affected by impaired appearance than boys, and this might increase their desire to cooperate with the treatment recommendations to improve their appearance²³⁻²⁴.

The influence of social stereotypes based on facial appearance as a major factor in total life adjustment is one reason for seeking orthodontic treatment. In addition, negative attitudes of school authorities and employers were not found to be a significant factor.

Ten percent of patients reported for treatment due to problems with biting, chewing, temporomandibular disorders, and headache to seeking professional advice. In the present study concern to improve function increased into adulthood. However, in a study carried out by Nurminen et al²⁹ functional reasons were reported by 47–68 percent of patients who had undergone orthognathic surgery. In a cross-sectional study conducted at bahia state university, most female participants wanted orthodontic treatment for aesthetic reasons but majority of men demanded treatment due to pain in TMJ³⁰.

CONCLUSION

1. The principle motivational factor in children and adults seeking orthodontic treatment was the desire to improve aesthetics.
2. From the parents/guardians perspective, the most important reason for seeking orthodontic treatment for their child was also the improvement of dental aesthetics.
3. The percentage of patients whose decision to undergo treatment might be guided by dental or other professionals, or their parents/guardians decreased with increasing patient age.

LIMITATIONS

There is evidence that socio-economic background may also play a role in the self-perception of malocclusion, with individuals in a higher social class considered to be more critical of their dental aesthetics. The current study did not take account of the influence

of socio-economic factors.

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