

## Original Article

### Assessment of Patient's Personal Satisfactory Levels with Orthodontic Therapy

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#### ABSTRACT:

**Objective:** To examine the satisfaction level of patients with their orthodontic treatment and problems faced at the Department of Orthodontics. **Materials and Methods:** This epidemiological investigation was conducted among 452 subjects. Among all 272 cases were treated and rest (180) were undergoing orthodontic procedure. All were interviewed regarding the experiences and satisfactory level. The data was collected on excel sheet and analyzed by SPSS 16.0 software. Student's t test and ANOVA test were used to analyze data. **Results:** Dentists (29.1%) mostly motivated the subjects for undergoing orthodontic treatment followed by friends (25.2%), and parents (20.7%). Mostly patients faced poor aesthetics (19.2%) due to wires and brackets as the chief complication. Long treatment duration (15.4%) was also one of the key factors for creating hindrance. Female patients had significantly high level of satisfaction as compared to male subjects. Similarly significant results were found among treated and those who were undergoing treatment. **Conclusion:** Most of the participants noted their dental irregularities by dentists. There were many problems commonly seen in this study, still patients are satisfied.

**Keywords:** Orthodontic treatment needs; reasons; experiences; satisfaction

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**This article may be cited as:** Gupta R, Sharma M, Singh S. Assessment of Patient's Personal Satisfactory Levels with Orthodontic Therapy. J Adv Med Dent Scie Res 2017;5(12):22-25.

Access this article online	
<p>Quick Response Code</p> 	Website: <a href="http://www.jamdsr.com">www.jamdsr.com</a>
	DOI: 10.21276/jamdsr.2017.5.12.07

#### INTRODUCTION

Malocclusion is a misalignment of teeth which affects the facial appearance and psychosocial status of the patient. Epidemiological research indicates that at least 70% of the population is affected by some form of occlusal malrelations. Improving dento facial appearance is the main reason for undergoing orthodontic treatment.<sup>1</sup>

Orthodontic treatment procedures, more than improving the quality of life, can bring physical, social and psychological progress in life.<sup>2</sup> The main objective of this treatment is to improve dental occlusion and make teeth in proper alignment, which ultimately results in a good functioning of dentition.<sup>3</sup>

Various studies have shown that problems associated with malocclusion such as traumatic occlusion, temporomandibular joint problems, periodontal disease and caries might resolve after orthodontic therapy.<sup>4,5</sup> There are different reasons and factors, which influence patients in seeking orthodontic treatment, had been reported in a number of previously published studies.<sup>6</sup>

Social and psychological impact of malocclusion which may be noticed either by the patient himself or by friends, family members and dissatisfaction to appearance may develop the desire for orthodontic treatment.<sup>4</sup> Dentists are

likely to play an important role in initiating and motivating patients for orthodontic treatment.<sup>7</sup>

Along with the benefits of orthodontic procedures, it has many complications which are faced during the treatment by the patients. Few studies explore such issues as pain, aesthetics problems, food accumulation and discomfort that may occur during treatment, and how it may affect patients' quality of life.<sup>8</sup> It is reported that 95% of the orthodontic patients experience varying degree of pain during orthodontic treatment.<sup>9</sup>

It has been also reported that gender and age of subjects were correlated with general attitude toward orthodontic treatment. Females had a greater desire to accept, undergo, and to be satisfied with orthodontic treatment than males<sup>10</sup> and younger subjects had a more positive attitude than older subjects.<sup>11</sup> Bos et al<sup>9</sup> evaluated treated and untreated subjects' attitudes towards orthodontic treatment and reported that previously treated subjects had a more positive attitude toward orthodontic treatment than untreated subjects. Hence the aim of the present study was to appraise patient's personal experiences with orthodontic treatment.

**METHODOLOGY**

**Study area**

The study was conducted among a sample of orthodontic patients from the Department of Orthodontics in Government Dental College, Jammu.

**Study population**

In this epidemiological study a total of 452 subjects were included out of which 272 were treated cases and 180 undergoing treatment. Further they were categorized by gender as 254 female and 198 male participants. Age wise, most of them belong to the age group of 21 to 25 years i.e. 208.

**Ethical permission**

Before starting the investigation, official permission was obtained from the head of the Institute and a verbal consent was obtained from all the participants. All the willing participants and those who gave positive response towards the survey were included.

**Procedure**

Patients who had already taken the treatment were contacted by their personal phone numbers and interviewed regarding the satisfaction and problems faced during the orthodontic treatment. Those who were undergoing treatment were interviewed on their respected visits. A Pilot study was conducted in order to ensure the level of validity and degree of repeatability (Cronbach's alpha=0.82).

A self prepared questionnaire was formulated containing information such as demographic profile, experience during treatment, reasons for taking orthodontic

treatment, complications during treatment and satisfaction with the treatment.

**Data analysis**

The data was collected on excel sheet and analyzed by SPSS 16.0 software. Student's t test and ANOVA test were used to analyze data. The level of significance was set at p value 0.05.

**RESULTS**

In the present study, dentists (29.1%) mostly motivated the subjects for undergoing orthodontic treatment followed by friends (25.2%), and parents (20.7%). Few participants were informed through other sources like teachers and social media (Graph 1).

The study evaluated different complications faced by the subjects as mostly patients faced poor aesthetics (19.2%) due to wires and brackets. Long treatment duration (15.4%) was also one of the key factors for creating hindrance. Problems of high treatment cost (13.2%), multiple visits (12.7%), dental phobia (11.2%), pain (9.2%) and mastication (8.3%) were also commonly seen among the population as shown in Graph 2.

According to gender females (0.72) had significantly high level of satisfaction as compared to male subjects (0.64) (Table 1). Similarly significant results were found among treated and those who were undergoing treatment as shown in Table 2 (p=0.000).

Regarding age; mean scores of satisfaction with orthodontic treatment were more among 21 to 25 years (0.76), followed by 26 to 30 years (0.67) and 16 to 20 years (0.64) (Table 3).

**Table 1:** Satisfactory scores among study subjects with orthodontic treatment

Sex	No	Mean	Std. Deviation	p-value
Female	254	0.72	0.652	0.003
Male	198	0.64	0.438	

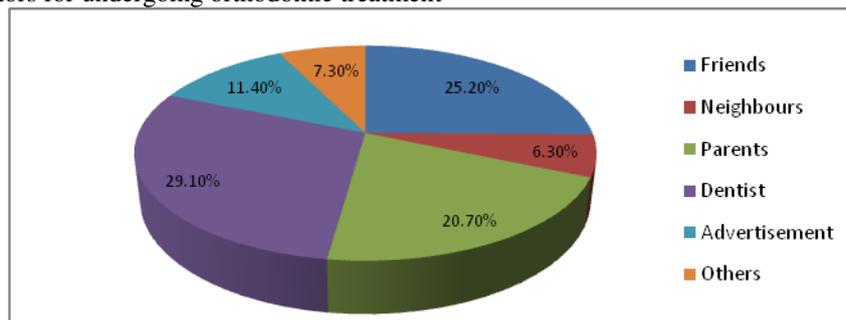
**Table 2:** Satisfactory scores among study subjects (treated and untreated) with orthodontic treatment

Subjects	No	Mean	Std. Deviation	p-value
Treated	272	0.78	0.863	0.000*
Undergoing	180	0.61	0.724	

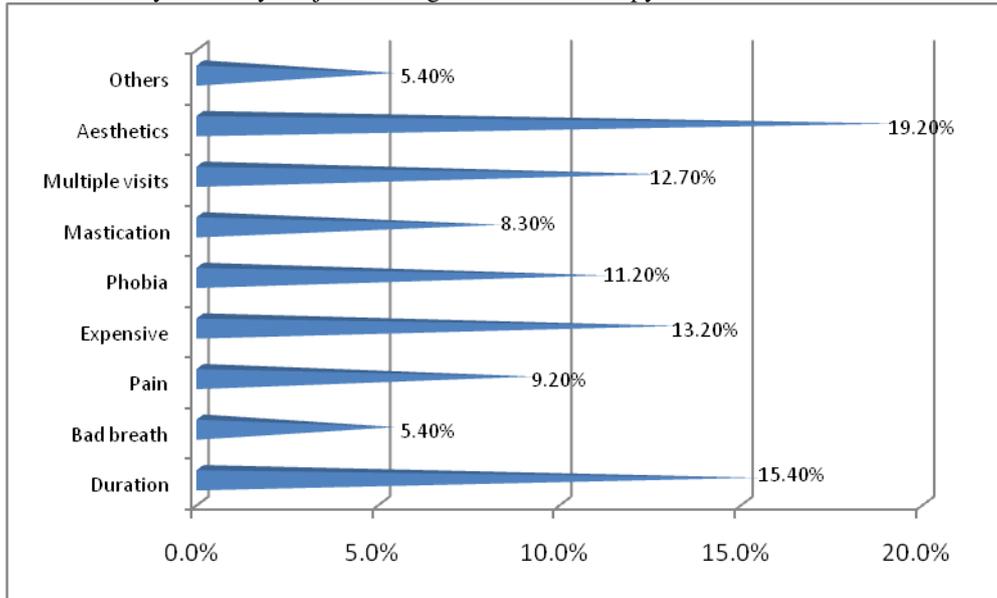
**Table 3:** Satisfactory scores among study subjects with orthodontic treatment in relation to age

Age (years)	No	Mean	Std. Deviation	F- value	p-value
16-20	136	.64	.526	1.627	0.173
21-25	208	.76	.582		
26-30	108	.67	.427		
Total	452	.69	.452		

**Graph 1:** Main factors for undergoing orthodontic treatment



**Graph 2** Problems faced by the study subjects during orthodontic therapy



**DISCUSSION**

Orthodontic treatment of malocclusion and craniofacial abnormalities, by ensuring proper alignment of the teeth, better occlusal and, may improve mastication, phonation, facial aesthetics.<sup>12</sup>

Therefore people go for orthodontic treatment for these reasons and some of them face poor experience during the treatments which are discussed in the current study. These problems have been highlighted in this article so that clinician can advance their capabilities to diminish the difficulties faced by the patients as the process is long-lasting.<sup>13</sup>

This study showed that subjects with age group of 21 to 25 years were more satisfied with the treatment and subjects with 16 to 20 years were least satisfied. But Shaw in 1981 mentioned that there is decrease in satisfaction with increasing age.<sup>6</sup> It might be due to that majority of subjects were between 21 to 25 years of age, so the high demand for enhancement in facial esthetics may be associated with this age group. Therefore, the desire to have an improved facial appearance by orthodontic treatment was found to be high among them. However Bos et al found that more attitude among older subjects compared to younger ones. The orthodontic experience may be fresh for the younger patients in their memory.<sup>9</sup>

In this study 29.1% of the patients seeking treatment were motivated by dentist. This result was similar to study by Breece et al.<sup>14</sup> Dentists have a large part to play in recommending orthodontic treatment when indicated. The state health service also educated the public about dental and orthodontic treatment. According to Morgenstern et al, survey among students and teachers of orthodontics, the main referral source was the patients themselves only (89.3%).<sup>15</sup>

Aesthetics of the orofacial region are very important aspects of human life. They might affect the quality of a patient's life. In the present study most of the participants were facing poor aesthetics due to orthodontic wires and

brackets (19.2%) as the main problem followed by longer duration (15.4%). Whereas most of the studies mentioned pain as the main cause of deterring from orthodontic treatment is pain.<sup>16,17</sup> However the intensity of the pain differs from patient to patient. It depends upon age, sex, race, emotional state as well as the cultural background.<sup>18</sup>

The study of Bernhardt et al has found that pain perceived after orthodontic treatment is greater than that of following extraction.<sup>19</sup> Female patients showed more negative response due to pain in this study as they are more sensitive to pain and male subjects have more capacity to tolerate pain and the results were in agreement with other studies.<sup>16,18</sup> However Lew in his study found that few subjects mentioned fear of pain as a reason for not taking orthodontic treatment.<sup>5</sup> In our study 9.2% participants reported that pain as the main complication.

Our study found that females had more level of satisfactory treatment than males and similar results were seen in study done by Bos et al in 2005.<sup>9</sup> Lathi et al showed that these differences are due to lack of orthodontic experiences among the subjects.<sup>21</sup> But there was no gender differences observed regarding attitude toward orthodontic treatment in Amado et al study in 2008.<sup>22</sup>

Patients who had undergone this procedure gave more satisfactory results than those who are undergoing treatment and again similar results were seen in Bos et al study.<sup>9</sup> Whereas Alhajjaa et al showed no significant differences among treated and untreated subjects.<sup>23</sup>

**CONCLUSION**

The results showed significant differences according to gender and among treated & and those who were undergoing treatment. Most of the participants were referred by dentists for orthodontic therapy. Aesthetic and longer duration were the main problems faced by the study subjects. So there were many problems commonly seen in this study but still patients gave positive response.

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**Source of support:** Nil

**Conflict of interest:** None declared

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