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Original Research

## Patient's Perceptions Regarding Orthodontic Needs and Satisfactory Level with the Procedure

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### Abstract:

**Background:** In order to keep the patients satisfied with Orthodontic treatment and to address the growing concern among new orthodontic patients, this study was undertaken to evaluate patient's perceptions of their orthodontic treatment needs and the satisfactory level with the procedure.

**Methodology:** This cross-sectional study was conducted among a sample of 362 patients who had received orthodontic treatment. Questionnaires included information factors that encouraged them to take orthodontic treatment, painful experience of orthodontic therapy, and also to know the effectiveness of the treatment. Student's *t*-test and ANOVA test were used to analyze results at  $P = 0.05$ .

**Results:** Most of the participants faced problems due to their dentition (60.2%), followed by mastication 23.6%. It was found that most of the study subjects were motivated by orthodontist to receive the treatment (29.7%). When the participants were asked about the complications faced by them during the procedure and the most common answer was a longer duration of the treatment (23.3%). Pain was also a common factor faced by the participants (15.9%). Significant results were seen according to gender and age.

**Conclusion:** The study concluded that problems in the dentition were the main factor to seek orthodontic treatment and most of the subjects were convinced by the specialist to undergo orthodontic therapy. Many problems faced during the treatment, but still majority gave a positive response to the treatment.

**Keywords:** Orthodontic experience, satisfaction, treatment needs

### Introduction

Orthodontics is a specialized branch of dentistry concerned with the development of deviations from the usual position of the teeth, jaws, and face. It can progress both the function and appearance of the mouth as well as face.<sup>1</sup> The main aims of orthodontic care are to produce a healthy, functional bite, creating greater resistance to disease and improving facial appearance.<sup>2</sup>

The need of orthodontic treatment among adults is becoming more common in the last decades as it results in a good

functioning and esthetically satisfying dentition in accordance with the face.<sup>3</sup> Social and psychological impact of it may develop the desire for orthodontic treatment.<sup>4</sup>

Various reasons and factors, which influenced the patients for undergoing orthodontic treatment, had been shown in a number of previous studies.<sup>5</sup> The main reason that leads adult individuals to search for orthodontic care is their dissatisfaction with their dental appearance and poor dental esthetics.<sup>6</sup>

But there are some factors that lead to rejection of orthodontic treatments such as experience of pain, duration of procedure, esthetics, problems in maintaining oral hygiene, etc. A study done by Langlade in 2003 among 200 adult patients evaluated the reasons that led to the initial rejections for undergoing orthodontic treatment. The researchers concluded the reasons as long duration of treatment, discomfort during wearing of appliances, poor esthetics of brackets, pain, and fear of disappointment with the final outcome of treatment.<sup>7</sup> Many studies have shown that problems associated with malocclusions such as traumatic occlusion, temporomandibular joint pain, periodontal disease, and caries might resolve after orthodontic therapy.<sup>4</sup>

According to Zhang *et al.*,<sup>8</sup> when patients are aware of the treatment consequences, such as discomfort, they develop more practical expectations, which may help them to give confidence assistance during treatment. Therefore, it is mandatory for orthodontists to investigate and understand the prospects, and problems of their patients receiving treatment.<sup>9</sup>

Patient level of satisfaction and success of treatment provided are positively correlated.<sup>10</sup> Hence, this study was planned to evaluate the patients' perceptions of their orthodontic demands and the level of satisfaction of patients in relation to professional performance.

### Material and Methods

This cross-sectional study was conducted among a sample of 362 patients who had received orthodontic treatment. The sample was selected from the Dental College and from Private Clinics in Raipur.

Address of all the participants was received from the respected orthodontist/dentist, and they were visited after making an appointment. All the willing patients and who were available on the day of interview were included in the study. Patients with medical problems and had orthognathic surgeries were

excluded from the study. Informed consent was achieved from all the participants. A pretested study was done among a group of 20 patients in order to ensure the level of validity and degree of repeatability (Cronbach's  $\alpha = 0.82$ ).

A self-administered questionnaire was prepared to assess the experiences of the patients while receiving orthodontic treatment and factors that encouraged them to take orthodontic treatment. Questionnaires included information regarding painful experience of orthodontic therapy, reasons for undergoing orthodontic procedure, reasons for knowing orthodontic procedure, behavior of orthodontist, problems in appointments during treatment, difficulties in maintaining oral hygiene, and satisfaction with outcome.

There were five questions which checked effectiveness of the treatment outcome as did your treatment straitened the teeth, did your smile get better, did the treatment helped in mastication, better oral hygiene, and healthy lifestyle.

**Data analysis**

The data were collected on excel sheet and analyzed by SPSS 16.0 software (SPSS Inc., Chicago, IL, USA). Student's *t*-test and ANOVA test were used to analyze results regarding satisfaction with the treatment. The level of significance was set at  $P = 0.05$ .

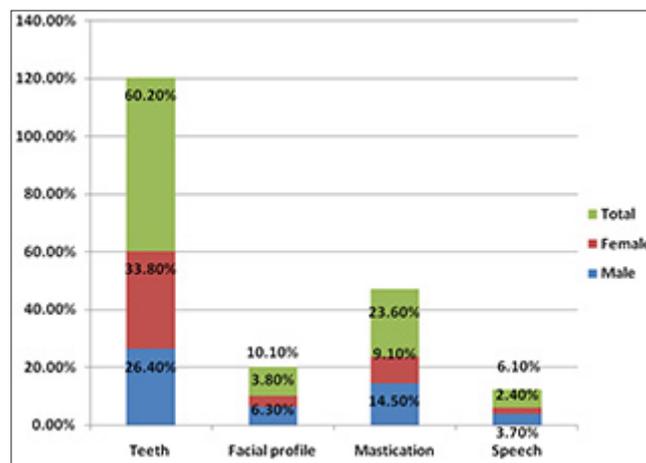
**Results**

The study was finalized among 362 participants who had received the treatment and out of total sample 165 were boys and 197 were girls. The age of the participants was from 16 to 19 years.

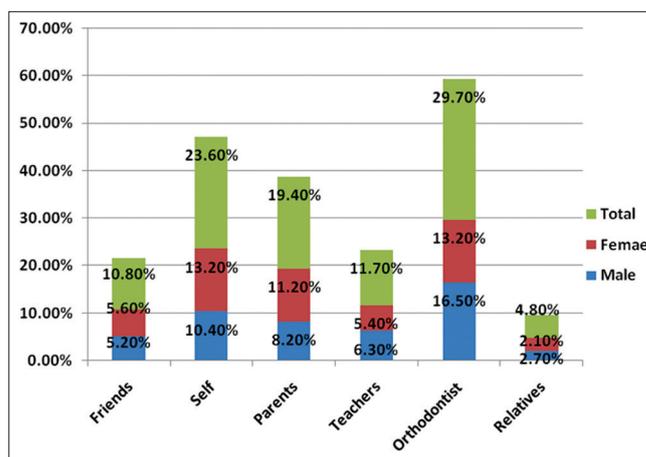
Graph 1 showed that most of the participants faced problems due to their dentition (60.2%), it could be malocclusion, proclination, spacing, etc., so they received orthodontic treatment. 23.6% were having problem in mastication during chewing of food. Few participants opted orthodontic therapy for the reasons of bad facial profile (10.1%) and hindrance in speech (6.1%).

It was interviewed that most of the study subjects were motivated by orthodontist to receive the treatment (29.7%). Around 23.6% were got awareness by themselves as they were facing problems due to poor occlusion. Friends, teachers, and relatives played a little less role in motivating the subjects to undergo the procedure (Graph 2).

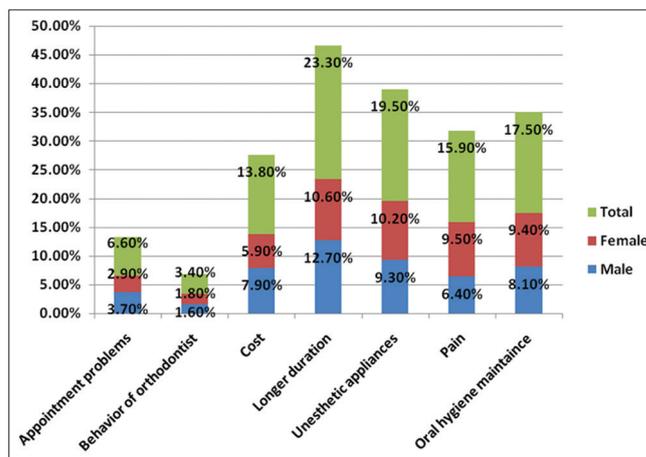
When the participants were asked about the complications faced by them during the procedure and the most common answer was longer duration of the treatment (23.3%), followed by poor aesthetics due to the braces (19.5%), and malodor (17.5%). Pain was also a common factor faced by the participants (15.9%). Few participants were unsatisfied with the behavior of orthodontist (Graph 3).



**Graph 1:** Different reasons for undergoing orthodontic treatment



**Graph 2:** Motivational factors for receiving orthodontic treatment.



**Graph 3:** Frequency of different complications faced by patients during the treatment.

According to the gender, it was seen that boys were significantly more satisfied with the outcomes of the procedure as compared to girls (Table 1). Similarly, participants in the older age groups shown more positives responses than the younger ones ( $P = 0.000$ ) as mentioned in Table 2.

Table 1: Mean of satisfaction after orthodontic therapy by gender.

Sex	No	Mean	SD	Significant
Boys	165	3.31	1.699	0.000
Girls	197	3.03	1.359	

SD: Standard deviation

Table 2: Mean of satisfaction after orthodontic therapy by age.

Age distribution	No	Mean	SD	F	Significant
16	90	2.40	1.364	43.056	0.000
17	109	2.25	1.798	78.021	0.000
18	91	4.20	0.401	69.078	0.000
19	72	3.51	1.392	30.045	0.000
Total	362	3.16	1.527		

SD: Standard deviation

## Discussion

Orthodontic treatments are provided to correct occlusion, over jet, overbite, spacing, and problems of tooth eruption. All these procedures are well-motivated for early treatment by the dentist. In any dental healthcare set up, patient satisfaction with respect to the quality of treatment provided by the dentist is a very important.<sup>11</sup>

Many studies have mentioned that patients were not satisfied when their demands were not satisfied. It is rational to judge that the level of patient's satisfaction may differ according to the dental procedures performed.<sup>12</sup> According to Bos *et al.*<sup>13</sup> health care professionals agree on the significance of maintaining cooperation with patients in order to make success of their treatment. When the patient's hopes are not understood, there may be disappointment.<sup>14</sup>

The present authors found that satisfaction after receiving orthodontic treatment might vary with age. Shaw also stated that the decrease in satisfaction is associated with advancing age.<sup>15</sup> It was also shown that boys were more satisfied with the treatment results than girls, whereas Bos *et al.* (2005) showed results in contrast according to gender.<sup>16</sup> But Amado *et al.* found no gender difference regarding the positive response toward orthodontic treatment.<sup>17</sup>

Researcher had concluded that the most important feature to affect the level of satisfaction of patients is not the final level of the treatment provided, but a good relationship between the patient and his dentist.<sup>15</sup>

It was shown that most subjects were satisfied with the positive behavior of the orthodontist and the results are in agreement with the study done by Khan *et al.* among orthodontic patients in Pakistan.<sup>11</sup> Similarly, many studies around the world have reported that patient and dentist interaction is the most important aspect which influences the level of satisfaction among patients.<sup>18,19</sup> Behavior of doctor with patient should include sympathy to patient regarding the expectations and demands.

Regarding the problems during the procedure includes high cost of the procedure as one of the important factor among the participants.<sup>20</sup> Bamise *et al.* mentioned that high treatment prices are major factor that creates problems in patients seeking dental treatment.<sup>21</sup> Similarly, Khan *et al.* also observed that 91.2% of patients visiting orthodontic department found the treatment to be expensive.<sup>11</sup>

The level of pain commonly noticed in this study and was different among boys and girls patients. However, the findings were lower than the results of study done by Kvam *et al.* in which it was mentioned that 95% of the patients experience pain after orthodontic treatment and among them very few experience severe type of pain.<sup>22</sup> Bernhardt *et al.* has shown that pain felt during the orthodontic treatment is more than that of following extraction.<sup>23</sup>

The study showed that most of the patients got motivation for orthodontic treatment only after consulting with orthodontist followed by self-awareness, parents and teachers. Oliveira *et al.* (2013) reported in their study that 35.5% patients were suggested by general dentist; 22% by consulting with an orthodontist; and 11.8% told they were motivated by the views of their friends and relatives.<sup>24</sup>

A good quality improvement of the orthodontic care is in relation to the patient's understanding and compliance about the physician's indications, which aims mainly to make good oral hygiene and device maintenance.<sup>25-27</sup> Failure to fulfill with these conditions may result in damaging the components of the orthodontic braces, leads to damage of the oral structures.

## Conclusion

Orthodontic procedure is still the treatment of choice ranging from children to adults, while there are risks with any treatment but with orthodontic treatment is minimum in comparison to other medical and dental treatments. This study concluded that response toward satisfactory level was good and significant according to gender and age.

## References

1. Sinha PK, Nanda RS, McNeil DW. Perceived orthodontist behaviors that predict patient satisfaction, orthodontist-patient relationship, and patient adherence in orthodontic treatment. *Am J Orthod Dentofacial Orthop* 1996;110(4):370-7.
2. Serogl HG, Klages U, Zentner A. Functional and social discomfort during orthodontic treatment – effects on compliance and prediction of patients' adaptation by personality variables. *Eur J Orthod* 2000;22(3):307-15.
3. Ahmed AF. Reasons for seeking orthodontic treatment in Qassim region: A pilot study. *Int Dent J Stud Res* 2013;1(3):58-62.
4. Tayer BH, Burek MJ. A survey of adults' attitudes toward orthodontic therapy. *Am J Orthod* 1981;79(3):305-15.

5. Lew KK. Attitudes and perceptions of adults towards orthodontic treatment in an Asian community. *Community Dent Oral Epidemiol* 1993;21(1):31-5.
6. Capelloza Filho L, Braga SA, Cavassan AO, Ozawa TO. Tratamento ortodôntico em adultos: Uma abordagem direcionada. *Rev Dent Press Ortod Ortop Fac* 2001;6(5):63-80.
7. Langlade M. *Terapêutica Ortodôntica*, 3ª ed. São Paulo: Ed Santos; 2003. p. 844.
8. Zhang M, McGrath C, Hägg U. Patients' expectations and experiences of fixed orthodontic appliance therapy. Impact on quality of life. *Angle Orthod* 2007;77(2):318-22.
9. Rao KD, Peters DH, Bandeen-Roche K. Towards patient-centered health services in India - a scale to measure patient perceptions of quality. *Int J Qual Health Care* 2006;18:414-21.
10. Newsome PR, Wright GH. A review of patient satisfaction: 2. Dental patient satisfaction: an appraisal of recent literature. *Br Dent J* 1999 27;186(4 Spec No):166-70.
11. Khan SQ, Ashraf B, Khan NQ, Hussain SS. Assessment of satisfaction level among orthodontic patients. *Pak Oral Dent J* 2014;34:651-5.
12. Sreenivas T, Parsad G. Patient satisfaction, A comparative study. *J Acad Hosp Adm* 2003;15(2):07-12.
13. Bos A, Vosselman N, Hoogstraten J, Prah-Andersen B. Patient compliance: a determinant of patient satisfaction? *Angle Orthod* 2005;75(4):526-31.
14. Freeman R. A psychodynamic understanding of the dentist-patient interaction. *Br Dent J* 1999;186(10):503-6.
15. Shaw WC. Factors influencing the desire for orthodontic treatment. *Eur J Orthod* 1981;3(3):151-62.
16. Bos A, Hoogstraten J, Prah-Andersen B. Attitudes towards orthodontic treatment: a comparison of treated and untreated subjects. *Eur J Orthod* 2005;27(2):148-54.
17. Amado J, Sierra AM, Gallón A, Alvarez C, Baccetti T. Relationship between personality traits and cooperation of adolescent orthodontic patients. *Angle Orthod* 2008;78(4):688-91.
18. Riley JL rd, Gordan VV, Rindal DB, Fellows JL, Qvist V, Patel S, *et al*. Components of patient satisfaction with a dental restorative visit: results from the Dental Practice-Based Research Network. *J Am Dent Assoc* 2012;143(9):1002-10.
19. Dewi FD, Sudjana G, Oesman YM. Patient satisfaction analysis on service quality of dental health care based on empathy and responsiveness. *Dent Res J (Isfahan)* 2011;8(4):172-7.
20. Naqvi ZA, Shaikh S, Pasha Z. Perception of the facial profile and orthodontic treatment outcome - importance of patient's opinion in the treatment plan. *Int Dent Med J Adv Res* 2015;1:1-5.
21. Bamise C, Bada T, Bamise F, Ogunbodede E. Dental care utilization and satisfaction of residential university students. *Libyan J Med* 2008;3(3):140-3.
22. Kvam E, Bondevik O, Gjerdet NR. Traumatic ulcers and pain in adults during orthodontic treatment. *Community Dent Oral Epidemiol* 1989;17(3):154-7.
23. Bernhardt MK, Southard KA, Batterson KD, Logan HL, Baker KA, Jakobsen JR. The effect of preemptive and/or postoperative ibuprofen therapy for orthodontic pain. *Am J Orthod Dentofacial Orthop* 2001;120(1):20-7.
24. Oliveira PG, Tavares RR, Freitas JC. Assessment of motivation, expectations and satisfaction of adult patients submitted to orthodontic treatment. *Dent Press J Orthod* 2013;18(2):81-7.
25. Ackerman M. Evidence-based orthodontics for the 21<sup>st</sup> century. *J Am Dent Assoc* 2004;135(2):162-7.
26. Khemka S, Baliga S, Thosar N. Approaches to improve access to dental care services. *Int Dent Med J Adv Res* 2015;1:1-4.
27. Gomes AP, da Silva EG, Gonçalves SH, Huhtala MF, Martinho FC, Gonçalves SE, *et al*. Relationship between patient's education level and knowledge on oral health preventive measures. *Int Dent Med J Adv Res* 2015;1:1-7.