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. The main aims of orthodontic care are to produce a healthy, functional bite, creating greater resistance to disease and improving facial appearance.

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. Social and psychological impact of it may develop the desire for orthodontic treatment.

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

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.

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.

According to Zhang et al., 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.

Patient level of satisfaction and success of treatment provided are positively correlated. 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 α = 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).

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.
Regarding the problems during the procedure includes high cost of the procedure as one of the important factor among the participants.26 Bamise et al. mentioned that high treatment prices are major factor that creates problems in patients seeking dental treatment.21 Similarly, Khan et al. also observed that 91.2% of patients visiting orthodontic department found the treatment to be expensive.11

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.22 Bernhardt et al. has shown that pain felt during the orthodontic treatment is more than that of following extraction.23

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.24

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.25-27 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.

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