

A RETROSPECTIVE STUDY OF PATIENT SATISFACTION WITH ORTHODONTIC TREATMENT

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ABSTRACT

Background and Objective: An important motivational factor for orthodontic treatment is improved dental and facial appearance. The relationship between physical appearance and perception of an aesthetic deviation, and the impact of such deviation on self-esteem and body image are important issues in determining the benefits gained from orthodontic treatment. The subjective of our study is to examine the patient's satisfaction with their orthodontic treatment at the department of orthodontics. **Material and Methods:** This retrospective study was conducted on a calculated sample of patients who received orthodontic treatment in SRM kattankulathur Dental College in the span of past 5 years. A validated questionnaire with a three-point response format was used to assess patient satisfaction with their respective orthodontic treatment. **Results:** A total of 149 responses were taken into consideration out of 150, which had a greater number of female patients than male. Most of the patients gave highest satisfaction score for the doctor-patient relationship domain followed by dento-facial improvement and psycho-social development. **Conclusion:** Though many factors were there to be considered, the results of the survey showed that doctor-patient relationship played a major role in patient satisfaction, most of the patients that underwent treatment in SRM kattankulathur dental college were satisfied with their overall orthodontic treatment.

KEY WORDS: Patient satisfaction, Orthodontic treatment, Retrospective study, Facial appearance, Adolescent patients.

INTRODUCTION:

Malocclusion is one of the oral conditions that refers to physical deviation from normal occlusion and function.^[1] It may negatively impact an individual's social interaction and their emotional well-being along with affecting dental functions and facial appearance.^[2] Patient satisfaction resulting after their treatment can be regulated by various aspects. According to the study done by Bos et al. factors like doctor and patient relationship, improvement in psychological and social aspects, situational incidents, dental and facial development were stated.^[3] According to many authors the relation between doctor and patient plays a major role in patient satisfaction with their respective treatment. Patient's view of orthodontic treatment also plays a major role to build a comfortable doctor-patient relationship which may eventually help in providing improved dental care.^[4] Many surveys have been conducted to see the consequences of malocclusion on psychological aspects of patients by examining their changes in confidence levels and other personality traits following the treatment.^[1] Considering the socioeconomic development and cultural importance of appearance, there has been notable increase in patient's motivation and need for undergoing an orthodontic procedure.^[5] Loss of motivation might lead to discontinuation of orthodontic treatment which may lead to compromised results.^[6] Maintaining proper dental alignment following orthodontic procedure remains a challenge for both orthodontists and patients. This might eventually affect the outcome of the entire treatment and patient satisfaction.^[7] It has been reported that females are mostly concerned about their appearance and are more willing to seek orthodontic treatment.^[8] Reports have shown that as age increases patient satisfaction towards orthodontic treatment decreases.^[9] Many other surveys also supported that most of the patients who seek orthodontic treatment were mostly adolescents.^[10] The aim of this study is to mainly focus on patient satisfaction after undergoing an orthodontic treatment in SRM kattankulathur dental college in the past 5 years.

MATERIALS AND METHODOLOGY:

Questionnaire-

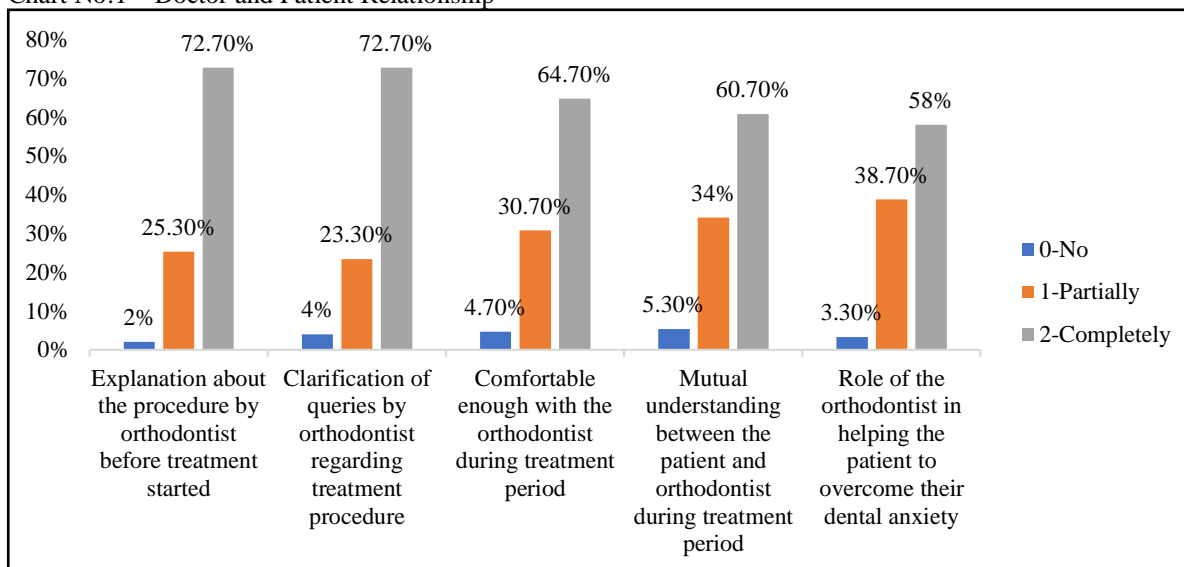
This retrospective study is a questionnaire-based study. The questionnaire used by Bos et al in 2000 was used to structure the questions [3]. It consists of 22 questions including the demographic data. These questions primarily emphasis on doctor and patient relationship, improvement in psychological and social aspects, situational incidents, dental and facial development. Every subset has 5 questions each. In this study a three-point response format with 0-disagree, 1-partially agree, 2-completely agree was used.

Sample: All the patients who completed orthodontic treatment at SRM kattankulathur dental college for the past 5 years i.e., from 2016-2021 and who are within the age of 15-35 were suitable to partake in this study. Patients who had discontinued their orthodontic treatment and patients with conditions like cleft lip and cleft palate were not included in this study. All the patients who were suitable to partake were requested to fill the questionnaire. The questionnaire was sent to all the patients through google forms. Estimated sample of 124 patients was set at a 95% confidence level and $\pm 5\%$ precision. Seeing the non-response rate, the sample size is set at 150.

RESULTS:

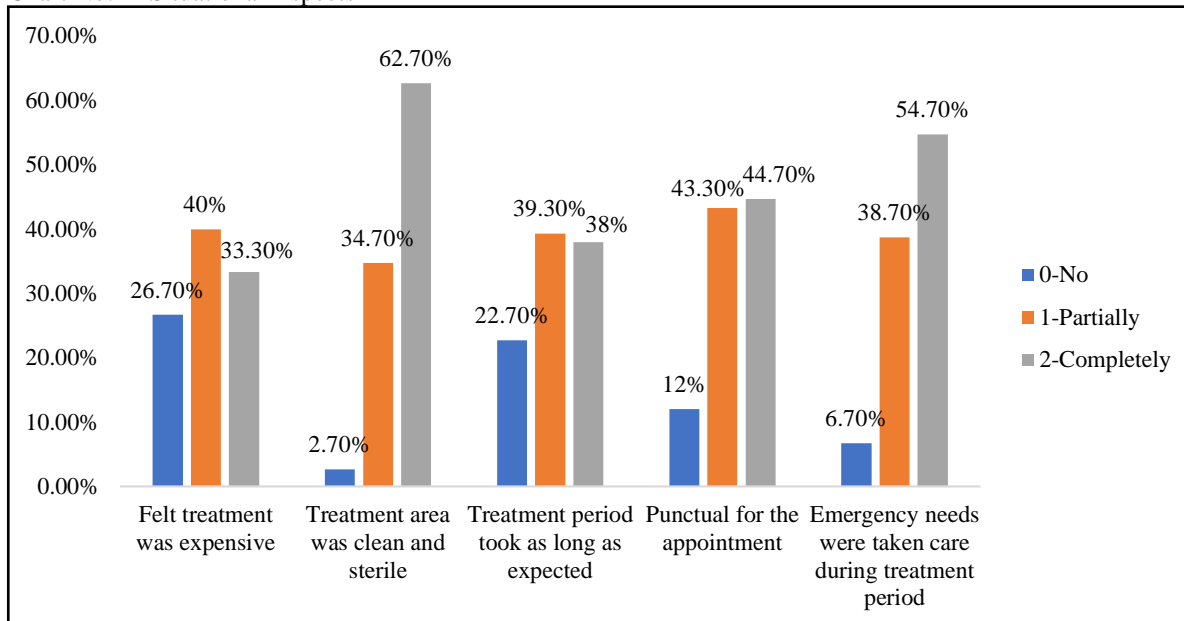
Out of 150 responses 149 were taken into consideration according to the inclusion criteria of which 69 were male participants (46%) and 81 were female participants (54%). The mean age of the participants is 23 years old (12%). The questionnaire was mainly divided into four domains of which each domain consists of five questions. According to the survey, under the doctor-patient relationship domain 72.7% of the patients were completely satisfied with the explanation and clarification of the treatment plan done by the orthodontist. Whereas 2-4% were not satisfied regarding the same. 64.7% of the patients were comfortable enough and 60.7% had a mutual understanding with their orthodontist. 58% of the patients mentioned that their orthodontist helped them to overcome their dental anxiety. (Chart No:1)

Chart No:1 – Doctor and Patient Relationship



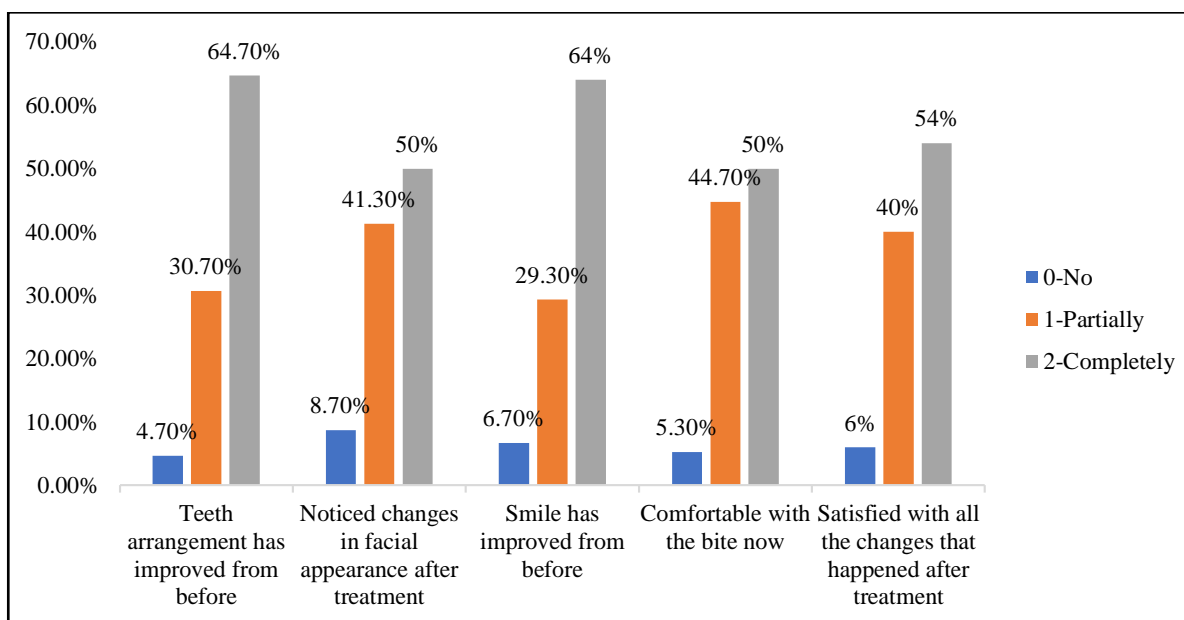
Concerning the situational aspects 40% of the patients thought the treatment was moderately expensive where as 33.3% thought it was totally expensive. 62.7% of the patients stated that the treatment area was clean and sterile. For 38% of the patients the treatment period took as long as they expected and for 22.7% the treatment period was not as they expected. 44.7% of the patients specified that they were punctual to their appointments and 54.7% agreed that their emergency needs were taken care of during the treatment period. (Chart No:2)

Chart No:2 - Situational Aspects



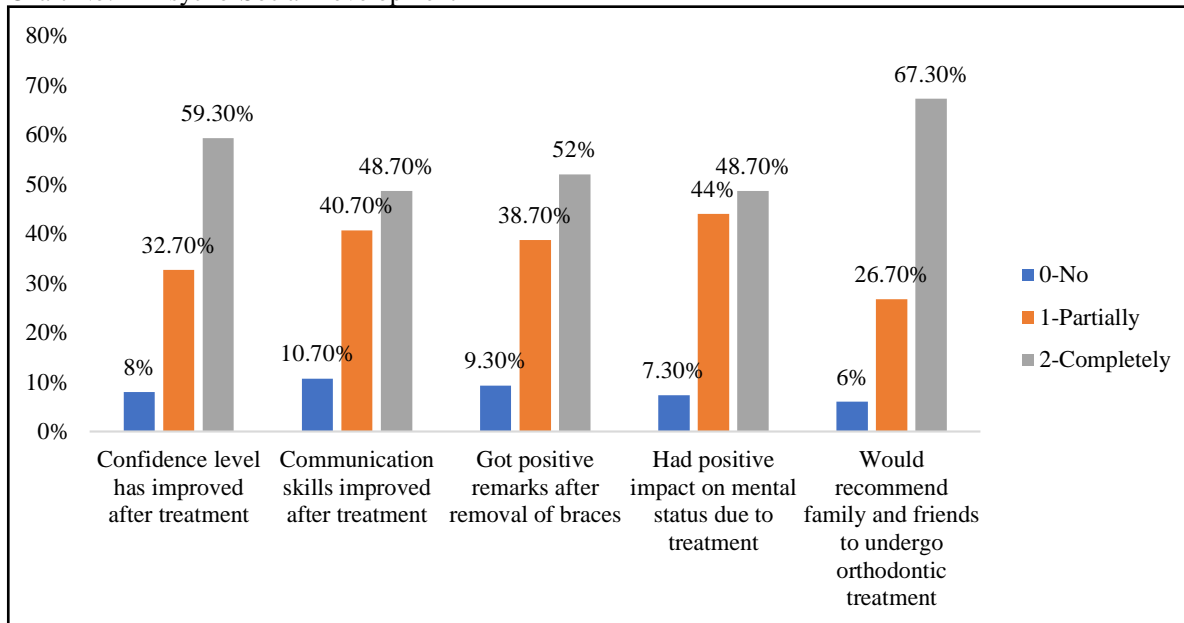
Relating to the dental and facial improvement 64.7% of the patients felt that their teeth arrangement was improved after the treatment and 64% felt that their smile was improved and 50% felt improvement in their facial appearance whereas 41.3% observed only slight changes in their facial appearance. 50% were completely comfortable with their bite whereas 44.7% were at little discomfort with their bite even after treatment. 54% of the patients were satisfied whereas 40% were moderately satisfied with all the changes that happened after their treatment. (Chart No:3)

ChartNo:3 Dento-Facial Improvement



Regarding to psycho-social development 59.3% of the patients felt their confidence levels were improved and 48.7% felt that their communication skills were improved whereas 40.7% felt there was not much noticeable change in their communication skills after their treatment and 48.7% felt that the treatment had a positive impact on their mental status whereas 44% felt slight impact on their mental status and 52.3% felt that they got positive remarks after removal of their braces. (Chart No:4)

Chart No:4 – Psycho-Social Development



DISCUSSION:

According to this survey most of the patients who had undergone orthodontic therapy were mostly satisfied with communicating the problems with their orthodontist during their treatment period. So, by this we can state that doctor and patient relationship was one of the most important concerning factors for patient satisfaction. Patients were partly satisfied by the changes that happened in their facial appearance, improvement in their communication skills following the treatment proving that dento-facial improvement and psycho-social development were comparatively important factors.

Most of the patients even suggested that they would encourage their family and friends to undergo orthodontic treatment. It is also important to know the expectations of the patients prior to the treatment to achieve the goal and to satisfy the patient accordingly [3]. It also shows that most of the participants were female and that female patients were more concerned about the esthetics and undergo orthodontic treatment. Regardless it was proven that there was no association between gender and patient satisfaction with orthodontic treatment from a study conducted in the year 2018 [2].

In this study patients were mostly satisfied by the explanation of the treatment procedure and the clarification of the queries they had regarding the same by the orthodontist. Many patients thought that the treatment was expensive and took longer time than expected which compromised the patient satisfaction. Patients also stated that most of their emergency needs were taken care during their treatment period which contributed to the patient satisfaction level. Most of the patients reported that their treatment area was clean and sterile.

Most of the adolescent patients seek orthodontic treatment mainly for esthetics. A previous similar study conducted has proven that adolescents who received orthodontic treatment reported more frequent self-initiated social involvement and demonstrate higher self-esteem [1]. In our study it is noted that the patients noticed changes in their communication skills following the treatment and were also less socially awkward. There were also noticeable changes that happened in their facial appearance and improvement in their smile and teeth arrangement there by increasing patient satisfaction. Although half of the patients were comfortable with their bite most of them were still not completely satisfied with their bite following treatment. Most of them agreed that their treatment had a positive impact on their mental status and also increased their confidence levels. For a long-term patient satisfaction, it completely depends upon the stability of the orthodontic treatment and proper usage of retainer prescribed by the orthodontist for that particular period. References on this very topic in other countries also reported similar results stating that though there were many factors contributing to patient satisfaction, the relationship between the doctor and patient is the most important one.

CONCLUSION:

Patient satisfaction mainly depends upon the expectations of the patient with their treatment outcome and the motivation of the patient to undergo the complete treatment. Patient satisfaction does not necessarily depend on the gender or the age of the patient. From this study it can be concluded that most of the patients were satisfied by the treatment they received at department of orthodontics. It also shows that Doctor-patient relationship is the most important factor for patient satisfaction. It is important for the patient to have a mutual understanding with their orthodontist.

REFERENCES:

1. Albino J, Lawrence S, Tedesco L. Psychological and social effects of orthodontic treatment. *J. Behav. Med.*, 1994; 17(1): 81-98.
2. Aljughaiman A, Alshammari A, Althumairi A, Alshammari A, Almasoud N, Nazir M. Patient Satisfaction with Orthodontic Treatment Received in Public and Private Hospitals in Dammam, Saudi Arabia. *Open Access Macedonian Journal of Medical Sciences*. 2018;6(8):1492-1497.
3. Keles F, Bos A. Satisfaction with orthodontic treatment. *The Angle Orthodontist*. 2012;83(3):507-511.
4. Bos A, Vosselman N, Hoogstraten J, Prah-Andersen B. Patient compliance: a determinant of patient satisfaction? *Angle Orthod*. 2005 ;75(4):526-531.
5. Phillips C, Broder HL, Bennett ME. Dentofacial disharmony: motivations for seeking treatment. *Int J Adult Orthodon Orthognath Surg*. 1997;12(1):7-15.
6. Prabakaran R, Seymour S, Moles D, Cunningham S. Motivation for orthodontic treatment investigated with Q-methodology: Patients' and parents' perspectives. *American Journal of Orthodontics and Dentofacial Orthopedics*. 2012;142(2):213-220.
7. Bondemark L, Holm A, Hansen K, Axelsson S, Mohlin B, Brattstrom V et al. Long-term Stability of Orthodontic Treatment and Patient Satisfaction. *The Angle Orthodontist*. 2007;77(1):181-191.
8. Maia N, Normando D, Maia F, Ferreira M, do Socorro Costa Feitosa Alves M. Factors associated with long-term patient satisfaction. *The Angle Orthodontist*. 2010;80(6):1155-1158.
9. Al-Omiri MK, Abu Alhaija ES. Factors affecting patient satisfaction after orthodontic treatment. *Angle Orthod*. 2006 ;76(3):422-31.
10. Anderson L, Arruda A, Inglehart M. Adolescent Patients' Treatment Motivation and Satisfaction with Orthodontic Treatment. *The Angle Orthodontist*. 2009;79(5):821-827.