

Received: 4th August 2014 Accepted: 2nd November 2014 Conflict of Interest: None

Original Research

Source of Support: Nil

A Comparison of Parental Satisfaction in the Quality of their Child's Orthodontic Treatment by Orthodontists and Pedodontists

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How to cite the article:

Baheti K, Raghav S, Kanungo H, Pharande AJ, Patil C, Jawale B. A comparison of parental satisfaction in the quality of their child's orthodontic treatment by orthodontists and pedodontists. J Int Oral Health 2015;7(1):26-9.

Abstract:

Background: The aim was to evaluate satisfaction of the parents of children who have undergone orthodontic treatment provided by their orthodontists and pediatric dentists in their private practice.

Materials and Methods: A total of 412 parents were interviewed with the help of a questionnaire containing information such as demographic part, experience of braces, motives for orthodontic treatment, complications faced during the procedure and reasoning for satisfaction. Student's *t*-test was applied to analyze the results. The level of significance was set at $P = 0.05$.

Results: A higher level of satisfaction was seen in parents of children treated by pedodontists (mean score of satisfaction = 0.752) when compared with those treated by orthodontists (mean score of satisfaction = 0.631) which was statistically significant. Parents of girl patients showed a higher mean score of satisfaction (1.021) when compared with those of boy patients (0.321), which was also statistically significant.

Conclusion: It can be concluded that the pedodontists performed orthodontic treatment to a similar standard as orthodontists, in fact they proved to be better in terms of patient care and behavior management as the parental satisfaction in the quality of orthodontic care was more with pediatric dentists than with orthodontists in this study.

Key Words: Orthodontists, parental satisfaction, pedodontists

Introduction

Orthodontic treatment is a procedure which is more than improving the quality of life and also can bring physical, social and psychological progress in life of the patients.¹ Its main objective is to improve dental occlusion and make teeth in proper alignment, which ultimately results in a good functioning of dentition.²

The basic intention for patients seeking orthodontic treatment is a discernible improvement in some aspect of their orofacial appearance. Orthodontic rehabilitation is something that makes people look better and make them feel superior about themselves. The dental profession has fostered the idea that improved occlusion advances health and longevity of the dentition, and so, many patients who seek orthodontic treatment care mention that their secondary goal of treatment is a benefit of oral health.³

Patient satisfaction with care is also a useful assess that evaluates quality of care and doctor-patient relationships. It has been used in medicine for many years and, as reflected in the current literature, is ever more being reported in dental profession.⁴

Patient satisfaction measures mostly process of treatment care, which is broadly defined as the professional behavior associated with providing care.⁵ Hence, measuring patient's satisfaction allows for the assessment of health systems and, particularly comparisons between different models of care delivery.

Only recent studies in orthodontics have been designed to measure satisfaction with care provided.⁵⁻⁷

The objective of this paper is to evaluate satisfaction of the parents of children who have undergone orthodontic treatment provided by their orthodontists and pediatric dentists in their private practice.

Materials and Methods

This descriptive cross-sectional study was conducted among parents of patients coming to pedodontics and orthodontics in Karad District of India during winters of 2013. A list of orthodontists and pedodontists practicing in the district was obtained from the local Indian Dental Association branch. Around 27 pedodontists and 24 orthodontists agreed to participate, and they provided a list of their patients with address.

A list of around 480 patients, 226 from a pediatric clinic and 254 from orthodontic clinic was obtained. Parents of all the patients were approached at their respective addresses and informed about the survey. All the willing parents were included, and those who were unwilling and not present during the visit were excluded. The overall sample finalized was 412, which included 218 boys and 194 girls. A pilot study was carried out to know

the level of validity and degree of repeatability (Cronbach's alpha = 0.88).

All the parents were interviewed with the help of a questionnaire containing information such as a demographic part, experience of braces, motives for orthodontic treatment, complications faced during the procedure and reasoning for satisfaction.

Data were collected on excel sheet and analyzed using SPSS 16.0 software (SPSS Inc., USA). Student's *t*-test was applied to analyze the results of taking treatment and satisfactory level during orthodontic procedure among different participants. The level of significance was set at $P = 0.05$.

Results

In the present study, a total number of 412 parents agreed to participate. The children of 232 parents were treated by orthodontists (Group 1) and 180 were treated by pedodontists (Group 2).

A higher level of satisfaction was seen in parents of children treated by pedodontists (mean score of satisfaction = 0.752) when compared with those treated by orthodontists (mean score of satisfaction = 0.631), which was statistically significant (Table 1).

Parents of girl patients showed a higher mean score of satisfaction (1.021) when compared to those of boy patients (0.321), which was also statistically significant (Table 2).

On comparing parents' responses to individual items in the satisfaction questionnaire between the orthodontists and pedodontists (Table 3), we observed that a higher percent of Group 1 parents found the treatment performance to be good, were more satisfied with the outcome, reported improved mastication and also found the treatment to be more economical than Group 2 parents. 88% of Group 1 parents and 86% of Group 2 parents observed their children's teeth to be straighter after treatment.

A higher percent of Group 2 parents found that their dentists appropriately explained the procedure beforehand, were gentler during the treatment, and spent sufficient time with their children. They also found the staff to be more respectful and appropriate sterilization being followed than that reported by Group 1 parents. However, a higher percent of children of Group 1 parents suffered from bad odor and pain during treatment when compared with Group 2 parents.

Discussion

Orthodontic care includes treating craniofacial abnormalities and malocclusion by ensuring proper alignment of dentition and proper occlusion, which improves phonation and aesthetics, along with having beneficial effects on the

Table 1: Mean scores of satisfaction with braces in children among group of orthodontic and pedodontic parents.

Groups	Number	Mean	SD	P value
Orthodontic parents	232	0.631	0.732	0.001*
Pedodontic parents	180	0.752	0.365	

SD: Standard deviation. T test used Student's *t*-test, *Significant

Table 2: Mean scores of satisfaction with braces among parents of boys and girls.

Gender	Number	Mean	SD	P value
Boys	194	0.321	0.214	0.000*
Girls	218	1.021	1.387	

SD: Standard deviation. T test used Student's *t*-test, *Significant

Table 3: Frequency of satisfaction among group of orthodontic (Group 1) and pedodontic (Group 2) parents.

Serial number	Questions	Group 1 (%)	Group 2 (%)
1	Was the dentist gentle during treatment	54	82
2	Was the treatment economical	87	56
3	Treatment performance was good	88	79
4	Was the procedure informed before start	77	81
5	Post treatment children has straighter teeth	88	86
6	Sufficient time was spent with child	54	68
7	Parents satisfied with treatment	79	77
8	Staff was respectful	68	82
9	Sterilization was maintained	63	76
10	Mastication improved	71	66
11	Suffered pain during treatment	66	58
12	Suffered from bad odor	62	44

general and oral health, and ultimately upgrading the quality of life.⁹

Child and parent participants have similar expectations of orthodontic treatment, as shown in a previous study. The majority of patients and parents had no expected experiences of orthodontic treatment. The expectation of an orthodontic appliance being fitted at the initial visit was significantly lower in parent participants than in children. However, expectations of pain, discomfort, problems with eating, speaking and cleaning teeth, and embarrassment with wearing fixed orthodontic appliances, were anticipated. Similar findings were reported by Bennett *et al.*¹⁰

However, another study found some differences in the expectations of orthodontic treatment between the patients and their parents, stating that some patients/parents might have friends or relatives wearing braces and this might have changed their expectations. Hence, effective communication between the orthodontist and the patients and their parents is considered to be essential.¹¹

Comparing this study's results to other studies in the literature is limited because there are no studies that evaluated parental satisfaction with orthodontic care between orthodontists and pediatric dentists. Moreover, the different questionnaires used

in other studies for assessing satisfaction after orthodontic care in previous data makes comparison with other studies more difficult.

Thirty-four percent of subjects in this study were completely satisfied with their teeth after orthodontic treatment, and only 4% reported dissatisfaction. Larsson and Bergstrom using Quality from Patient's Perspective questionnaire reported that 74% of subjects expressed complete satisfaction with the quality of orthodontic treatment. In their study, 29% of subjects evaluated were dissatisfied or partially satisfied.⁸

Phillips *et al.* found that males have different expectations of orthodontic treatment than females.¹² However, this difference in expectations was not translated to a significant difference in patient satisfaction in this study. Furthermore, there is a possibility that these individuals may be considerably less dissatisfied than they were at the beginning of treatment although dissatisfaction at the end of treatment is perceptible. This cannot be known from the collected data, and an evaluation of patient satisfaction should have been performed before orthodontic treatment for such subjects.

Many studies correlated satisfaction of dental appearance with age and sex and reported that satisfaction with dentofacial appearance decreases with advancing age.^{13,8} Therefore, older age group are expected to be less satisfied with their dentofacial appearance than younger.

It was found that males are more satisfied with their dental appearance than are females. It has been shown that malaligned teeth concern girls more than boys,¹⁴ and females perceive more need for orthodontic treatment than males.¹⁵

Parents seemed to be more informed about the duration of orthodontic treatment than their children. As more children are wearing fixed orthodontic appliances, it would have been expected that this information would have been passed on in peer conversation. The duration of orthodontic treatment has been shown to be poorly understood in some ethnic minorities.¹⁶

Patients and their parents have high expectations that orthodontic treatment will produce straight teeth and a better smile. However, expectations are higher with regard to straight teeth compared to a better smile. Parents expected a higher increase in social confidence as a result of orthodontic treatment than their children, as shown by Tung and Kiyak.¹⁷

Participants felt that orthodontic treatment was unlikely to improve mastication, speaking or career prospects. Bos *et al.*¹⁵ stated that patients and parents expected orthodontic treatment to improve mastication, speech, and success in future occupations.

Conclusion

The present study made it evident that patients' and their parents' satisfaction in relation to professional performance depends essentially on the good relationship with the dentist. We observed that the parental satisfaction in the quality of orthodontic care was more with pediatric dentists than with orthodontists, which shows that pedodontists also performed orthodontic treatment to a similar standard as orthodontists, in fact they proved to be better in terms of patient care and behavior management.

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