

Assessment of Patient Satisfaction Level with Orthodontic Treatment Care- A Questionnaire Survey

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Abstract

The management of patients with malocclusion demand regular follow up and patient cooperation. This study was done to assess patient satisfaction with orthodontic care in dental hospital. This questionnaire study was conducted among 100 subjects in age ranged 13- 20 years of both genders. Level of satisfaction was evaluated on Likert type items. Score 1 indicated very dissatisfied, 2 indicated dissatisfied, 3 neither dissatisfied nor satisfied, 4 satisfied and 5 very satisfied. 75% were very satisfied about behavior of orthodontist. 55% were very satisfied about response of orthodontist in case of emergency. 68% were very satisfied about information given to patient about treatment. 72% were very satisfied about overall duration of treatment. 44% were very satisfied about working days and hours of hospital. 52% were very satisfied about rate of treatment. 80% were very satisfied regarding comfort in scheduling appointments. 65% were very satisfied about condition of the waiting area. 75% were very satisfied about outcome of the treatment. 92% were very satisfied about overall satisfaction of treatment. Authors found that most of the patients were satisfied regarding orthodontic treatment outcome. Higher satisfaction was found related to comfort in arranging appointments and behavior of Orthodontist.

Key words: Appointments, Orthodontics, Satisfaction

Introduction

There has been increase in number of subjects undergoing orthodontic treatment. High income, education and awareness are reasons for it. Esthetics is of main concern especially in youth. Malocclusion is one of the main complaints for which patient visit to dentist. With the advancement of treatment modality, good results have been achieved [1].

The management of patients with malocclusion demand regular follow up and patient cooperation [2]. The duration of treatment may vary from case to case which usually lasts from 6 months to 18 months. The goal of the orthodontic treatment is to provide good and favorable results and to reach upto the expectation of patients [3]. However, with the considerable rise in number of orthodontic cases, the quality of work has also declined. The number of failure cases and shifting of patient from one orthodontist to another is matter of worry [4].

Female tend to have more orthodontic treatment than male. Factors such as dentist and patient, work quality, accessibility, convenience of care, competency of dentist and cost of orthodontic treatment determines the patients' satisfaction [5]. Research has shown that patient's expectation is to get better dental and facial appearance. Assessment of patient satisfaction helps in improving planning and organization of services resulting in quality work [6]. Expectation is found to influence patient's assessment of quality of treatment and final satisfaction with outcome of orthodontics treatment [7]. The present study was to assess patient satisfaction with orthodontic care in dental hospital.

Materials & Methods

This questionnaire study was conducted in department of Orthodontics. This study done among 100 subjects in age ranged 13- 20 years of both genders who had completed their orthodontic treatment since 6 months in the department of Orthodontics & Orthopedics. The study procedure was approved from institutional ethics committee. All participants were well informed telephonically regarding the study and their written consent was obtained after getting their verbal consent for the study.

Inclusion criteria were subjects who had successfully completed orthodontic treatment and those giving consent. Exclusion criteria were subjects who discontinued their treatment in between and those not willingly to participate. In the present study considering absolute precision of 10% and desired confidence level of 95% sample size was calculated to be 98. We included 100 subjects.

All the communication was done through e- mails and phones. Data was prepared which comprised of recording of subject's name, age, gender, duration of treatment, type of treatment etc. A questionnaire was formulated which consists of information pertaining to overall experience, staff, waiting area, behavior of personal concerned, cost etc. Intensity of pleasure was assessed on Likert type things. Score 1 indicated very dissatisfied, 2 indicated dissatisfied, 3 neither dissatisfied nor satisfied, 4 satisfied and 5 very satisfied. Subjects younger to 14 years completed the questionnaire with the help of their parents who always escorted their children during recall visits and those 14 years or older completed themselves. Response of the questionnaire thus obtained was clubbed for statistical analysis. Level of significance was put below 0.05.

Results

Table I shows that age group 13-14 years had 15 males and 22 females, 15-16 years had 10 males and 17 females, 17-18 years had 8 males and 12 females and 19-20 years had 7 males and 9 females.

Table II indicates that, 75% subjects were very satisfied, 20% were satisfied and 5% were neither dissatisfied nor satisfied regarding behavior of orthodontist. Regarding orthodontist behavior during emergency call, a response of very satisfied (55%), satisfied (20%), neither dissatisfied nor satisfied (15%) was obtained. It was found that regarding information given to patient about treatment, a response of very satisfied (68%), satisfied (25%) and neither dissatisfied nor satisfied (7%) was seen. 72% were very satisfied, 20% were satisfied and 18% were neither dissatisfied nor satisfied regarding duration of complete treatment. Maximum subjects (44%) were very satisfied, (30%) satisfied and (16%) were neither dissatisfied nor satisfied about total working hours and days of hospital. Maximum subjects (52%) were very satisfied, (16%) satisfied, (12%) were neither dissatisfied nor satisfied and (20%) dissatisfied about rate of treatment. 80% were very satisfied, 15% were satisfied and 5% were neither

dissatisfied about comfort in scheduling appointments. 65% were very satisfied, 20% were satisfied and 15% were neither dissatisfied nor satisfied about condition (environment) of the waiting. 75% were very satisfied, 13% were satisfied and 12% were neither dissatisfied nor satisfied about outcome of results. 92% were very satisfied, 20% were satisfied and 8% were neither dissatisfied nor satisfied about overall satisfaction of results. The difference was significant ($P < 0.05$).

Discussion

Malocclusion is one of the most commonly occurring dental anomalies among people worldwide. Orthodontic treatment is done in routine basis in such patients [8]. Spacing, rotation, crowding, transposition, open bite, deep bite, cross bite, tipping etc. all come under malocclusion [9]. The completion of orthodontic treatment is lengthy procedure and it demands lots of patience. Some may even require removable appliances [10]. Maxillary lingual retainer is usually placed in most of the patients. With the rise in orthodontic patients, there is considerable increase in patient expectations. Girls are more concerned about their esthetics as compared to boys [11]. The present questionnaire survey was to assess patient satisfaction level after obtaining orthodontic treatment.

In this study we included 100 subjects (males- 40, females- 60) of age ranged 13-20 years. Age group 13-14 years had 15 males and 22 females, 15-16 years had 10 males and 17 females, 17-18 years had 8 males and 12 females and 19-20 years had 7 males and 9 females.

Lyros et al [12] in their study assessed patient satisfaction who received orthodontic treatment. They observed that overall fulfillment was significantly related with total period of treatment, fees remunerated by patients, treatment outcome, the behavior of personnel who conducted first clinical evaluation, and dentist's response to an emergency. 97% would recommend the Orthodontic Clinic to their relatives and friends.

We found that 75% were very satisfied, 20% were satisfied and 5% were neither dissatisfied nor satisfied about behavior of orthodontist. Regarding orthodontist behavior during emergency call, a response of very satisfied (55%), satisfied (20%), neither dissatisfied nor satisfied (15%) was obtained. It was found that regarding information given to patient about treatment, a response of very satisfied (68%), satisfied (25%) and neither dissatisfied nor satisfied (7%) was seen.

Feldmann et al [13] in their study included 60 girls and 60 boys with mean age of 14.3 years. They were given a questionnaire related to treatment motivation, satisfaction with treatment outcome, quality of care and perceived pain and discomfort during active treatment. Satisfaction level with treatment outcome was significantly higher in patients. A correlation was found between patients' perception and satisfaction with treatment outcome. Satisfaction was affected by pain and discomfort during treatment.

We observed that 72% were very satisfied about total duration of treatment. 44% were very satisfied about opening days and hours of hospital. 52% were very satisfied and 20% were dissatisfied about cost of treatment. Most of them (80%) were convinced about sootherness in arranging appointments. 65% were very happy with environment(condition) of waiting area. 75% were very happy with treatment. Most of them (92%) were very happy with overall treatment procedure.

Aljughaiman et al[14] assessed patient satisfaction with orthodontic treatment in total of 229 subjects. There were 65.5% females and 34.5% males. The mean doctor-patient relationship satisfaction score was 4.33, dentofacial improvement score was 4.23, dental functions score was 4.20 and psychosocial improvement score was 3.94. The patients who received treatment in public hospitals were less satisfied than those who received in private clinics. However, there was significant more satisfaction among patients being treated by public orthodontists than by the private orthodontists.

Feldens et al conducted a study among 704 adolescents aged 12 and 13 years to assess patient desire to get orthodontic treatment. The outcome was significantly more prevalent among girls, those with difficulty chewing, those with greater malocclusion severity and those dissatisfied with their dental appearance [15].

The inadequacy of the study is small sample volume. Moreover, parameters such as pain, discomfort, treatment with public or private orthodontic were not covered.

Conclusion

Authors found that most of the patients were satisfied regarding orthodontic treatment outcome. Higher satisfaction was found related to comfort in arranging appointments and behavior of Orthodontist.

References

1. Nasr, I.H; Sayers, M.; Newton T.: Do patient information leaflets affect patients' expectation of orthodontic treatment? A randomized controlled trial. *J Orthod.* 38,257–68, 2011.
2. Asl, A.N; Shokravi, M; Jamali, Z; Shirazi, S.: Barriers and drawbacks of the assessment of dental fear, dental anxiety and dental phobia in children: A critical literature review. *J Clin Pediatr Dent.*41(6), 399-423, 2017.
3. Alyasi, M; Al Halabi, M; Hussein, I; Khamis, A.H; Kowash, M.: Dentists' knowledge of the guidelines of traumatic dental injuries in the United Arab Emirates. *Eur J Paediatr Dent.*19(4), 271-6, 2018.
4. Keles, F; Bos, A.: Satisfaction with orthodontic treatment. *Angle Orthod.* 83(3), 507-11,2013.

5. Pachêco-Pereira, C; Pereira, J.R; Dick, B.D; Perez, A; Flores-Mir, C.: Factors associated with patient and parent satisfaction after orthodontic treatment: A systematic review. *Am J Orthod Dentofacial Orthop* .148(4), 652-9,2015.
6. Maia, N.G; Normando, D; Maia, F.A; Ferreira, M.A; do Socorra Costa Feitosa Alves, M.: Factors associated with long-term patient satisfaction. *Angle Orthod*. 80,1155–1158, 2010.
7. Keles, F; Bos, A.: Satisfaction with orthodontic treatment. *Angle Orthod*. 83:507–51, 2013.
8. Johal, A; Alyaqoobi, I; Patel, R; Cox, S.: The impact of orthodontic treatment on quality of life and self-esteem in adult patients. *Eur J Orthod*. 37, 233-7, 2015.
9. Feu, D; Miguel, J.A; Celeste, R.K; Oliveira, B.H.: Effect of orthodontic treatment on oral health-related quality of life. *Angle Orthod*. 83,892-8, 2013.
10. Mahrous, M.S, Hifnawy, T.: Patient satisfaction from dental services provided by the college of dentistry, taibah university, Saudi Arabia. *J Taibah Univ Sci*. 7:104-9, 2012.
11. Alghamdi, F.S.: The impact of service quality perception on patient satisfaction in government hospitals in southern Saudi Arabia. *Saudi Med J*. 2035,1271-3, 2014.
12. Lyros, I; Pavi, E; Tsolakis, A.I; Makou,M; Kyriopoulo, J.: Satisfaction with Orthodontic Care Provided in a University Orthodontic Clinic. *The Open Dentistry Journal*. 28;13(1), 2019.
13. Feldmann, I.: Satisfaction with orthodontic treatment outcome. *Angle Orthodontist*. 84(4),581-7, 2014.
14. Aljughaiman, A; Alshammari, A; Althumairi, A; Alshammari, A; Almasoud, N; Nazir, M.A.: Patient Satisfaction with Orthodontic Treatment Received in Public and Private Hospitals in Dammam, Saudi Arabia. *Open access Macedonian journal of medical sciences*. 20, 6(8),1492, 2018.
15. Feldens,C,A; Nakamura, E.K; Tessarollo, F.R; Closs, L.Q.: Desire for orthodontic treatment and associated factors among adolescents in southern brazil. *Angle Orthod*. 85,224-32,2015.

Legends for illustrations

Tables

Table I Distribution of subjects

Age groups (Years)	Male	Female
13- 14	15	22
15- 16	10	17
17- 18	8	12
19-20	7	9
Total	40	60

Table II Questionnaire used in the study and their response

Questionnaire	Very dissatisfied	Dissatisfied	Neither dissatisfied Nor satisfied	Satisfied	Very Satisfied	P value
1. Behavior of Orthodontist	0	0	5	20	75	0.01
2. Orthodontist behavior during emergency call	0	0	15	30	55	0.02
3. Information given to patient about t/t	0	0	7	25	68	0.01
4. Duration of complete treatment	0	0	18	20	72	0.04
5. Total working hours & days of hospital	0	10	16	30	44	0.05
6. Rate of treatment	0	20	12	16	52	0.05
7. Comfort in scheduling appointments	0	0	5	15	80	0.01
8. Condition of waiting area	0	0	15	20	65	0.01
9. Outcome of treatment	0	0	12	13	75	0.02
10. Overall satisfaction of results	0	0	8	20	72	0.01