



EXPECTATION OF PATIENT WITH MALOCCLUSION FROM ORTHODONTIC TREATMENT: A DESCRIPTIVE CROSS-SECTIONAL SURVEY AMONG PRIVATE DENTAL CLINICS IN INDIA

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ABSTRACT

Aim: The study is conducted to explore various expectations of patients with malocclusion from Orthodontic treatment.

Material and Methods: A cross-sectional questionnaire survey was conducted among 350 Patients with malocclusion seeking Orthodontic treatment in various private clinics of Jodhpur city. Questionnaire consists of three parts assessing the expectation of patients from Orthodontic treatment.

Results: Majority of study participants {211(60%)} belongs to age group of 16-19 years. Among all study participants 248 (71%) were females. Majority of study participants {233(67%)} expects their Orthodontic treatment duration to be 1-2 years. 148(42%) of study participants expects their Orthodontic treatment to be very traumatic while 134(38%) of study participants expects very less side effects from Orthodontic treatment. Majority of Study participants {189(54%)} expects an excellent improvement from Orthodontic treatment. Attitude of orthodontist was positive for 175 (50%) study participants.

Conclusions: Expectation of the patients towards Orthodontic treatment and Orthodontist were positive and are satisfied about their treatment. Most of the patients had realistic expectations regarding their Orthodontic treatment which can be fulfilled by the Orthodontists.

KEYWORDS: attitude, malocclusion, orthodontic treatment

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INTRODUCTION

Orthodontics is defined as branch of dentistry that deals with correction of malocclusion, in order, whenever possible; to achieve functionally appropriate occlusion and

optimum dental and facial aesthetics¹. Orthodontic treatment has deep impact on psychosocial aspect of the patients. It has been estimated that about 80% of orthodontic patients seek treatment out of aesthetic concern rather than the

health and function². Patients and their parents expect orthodontic treatment to result in well-aligned teeth and improvement in overall facial appearance³. They also expect the treatment to improve their dental and

facial aesthetics⁴ and consequently their popularity and social acceptance⁵. In orthodontic treatment planning, a strong focus on normative assessments and an objective evaluation of the patients' treatment needs by established metric standards could lead to an inadvertent overlooking of the patient's expectations concerning the treatment. Quality of life and patient-oriented outcomes have thus become an accepted endpoint in clinical practice in recent years, as the patient's experience and preference has grown⁶.

In recent decades, a high demand for orthodontic treatment in adults was observed. This fact is due to the increased awareness by patients of the need for good oral health, enabling the patient to reach adulthood with a greater number of teeth in the mouth⁷. It also happens by the increase on esthetic requirement from society⁷⁻¹¹. Due to increased access to information for the public about orthodontic treatment, and by the technological advancements in the field of orthodontics⁷. However, some "dogmas" regarding orthodontic treatment such as lack of communication between the parties involved expectations for different results from patient in relation to the professional's view and technical glitches persist among the population in general, resulting in failure or dissatisfaction with treatment¹².

Previous studies have revealed that patient/parent expectations from orthodontic treatments are to get better facial or dental appearance, dental health and oral function^{13, 14}. Improvement of "social competitiveness", attractiveness and psychological confidence are also perceived benefits from orthodontic treatment¹⁵⁻¹⁷. However, there is another kind of expectations related to the treatment process and experience in itself¹⁸. For example, if patients/parents

do not have a clear understanding of the duration of treatment, possibility of removing teeth, possible pain and discomfort with eating, speaking and cleaning teeth, reaching satisfactory treatment outcomes is more challenging than with people who have had sufficient mental preparation prior to treatment¹⁹⁻²¹.

Expectation from the Orthodontic treatment varies from patient to patient. Knowing patient expectation is very important for the Dental professional as final treatment to be applied on patient depends on patient expectations and skills of Dentist. And not many studies in India till now had explored the various expectation of patient from Orthodontic treatment. Therefore this study is conducted to explore various expectations of patients with malocclusion from Orthodontic treatment.

MATERIAL AND METHODS

It is a Cross-sectional descriptive questionnaire study. The study is conducted among patients with chief complain of irregularly arrangement of teeth visiting a dental clinic for the correction of malocclusion. All the patient who had started or not started with Orthodontic treatment was included in the study. Ethical clearance is obtained from Ethical committee of Jodhpur Dental College, general Hospital. Prior to survey permission from owner of clinic and informed consent from patients was availed. Data is collected from private dental clinics of Jodhpur city. City is divided into 5 zones according to directions East, West, South, North and central. From each zone 10 clinics were selected. A total of 50 clinics were selected and from each clinic about 7 patients with malocclusion who had given their consent to be the part of

survey were included in the study. Sample size of the study was 350. The survey was conducted in October 2016.

A close-ended questionnaire was made to assess the expectation of patients from Orthodontic treatment. The questionnaire is divided into 3 parts. First part consists of Demographic details of the patients such as name, age, gender, Socio-economic status of patients which is according to Socioeconomic Status Scale of Kupuswamy²². Second part consists of 3 questions which has details about patient Orthodontic treatment status such as age of starting treatment, Stage of orthodontic treatment and chief complaint of the patient. Third part consists of questions regarding the expectations of the patient from Orthodontic Treatment such as expectations from Orthodontic treatment duration, types of orthodontic treatment do they expect, expectation from others/public towards patients Orthodontic treatment and others.

Before the main survey, a pilot study was conducted among 10% of total study participants to pretest the questionnaire and check the feasibility of study. The Proforma was tested for reproducibility by test-retest. Reliability of the Questionnaire was assessed by using Test-Retest and the values of measured Kappa (k) = 0.86 Weighted Kappa (k_w) = 0.9. Internal consistency of questionnaires was assessed by applying Chronbachs-Alpha (α) and the value of α = 0.78 was measured.

Demographic details of the study participants and details about the Orthodontic treatment were analyzed after the entry of data in Microsoft excel. Descriptive analysis was done and total number and percentages were presented.

RESULTS

Table 1 shows the Demographic details of study participants. Majority of study participants {211(60%)} belongs to

age group of 16-19 years. Among all study participants 248 (71%) were females. Of all study participants majority of study participants {100(29%)} belongs to upper

middle age group of Socioeconomic Status Scale of Kupuswamy.

Table 1. Demographic details of study participants.

DEMOGRAPHIC DETAILS	NUMBER	PERCENTAGE
AGE GROUP		
12-15 years	82	23%
16-19 years	211	60%
More than 20 years	57	17%
Total	350	100%
GENDER		
Male	102	29%
Female	248	71%
Total	350	100%
SOCIO-ECONOMIC STATUS		
UPPER (26 – 29)	81	23%
UPPER MIDDLE (16 – 25)	100	29%
LOWER MIDDLE (11 – 15)	79	22%
UPPER LOWER (5 – 10)	63	18%
LOWER (< 5)	27	8%
Total	350	100%

Table 2 shows the various details about the Orthodontic treatment such as age of starting the treatment, stage of Orthodontic treatment and chief complaint of the study participants. The table shows that about 181(52%) of study participants were of 15-20 years age group during their initial dental visit for Orthodontic treatment. The main chief complaint of majority of study participants was crowding of teeth {127(36%)}.

Table 3 shows that majority of study participants {233(67%)} expects there Orthodontic treatment duration to be 1-2 years. 148(42%) of study participants expects their Orthodontic treatment to be very traumatic while 134(38%) of study participants expects very less side effects from Orthodontic treatment. Expected frequency of appointments according to majority of study participants was once in a month. Majority of Study participants {189(54%)} expects an excellent improvement from

Orthodontic treatment. Attitude of others/public was neutral towards Orthodontic treatment according to 186 (53%) study participants. Attitude of orthodontist was positive for 175 (50%) study participants.

DISCUSSION

The present study assessed the expectations of patients with any type of malocclusion and visited the dental clinic for correction. In the present study majority of study participants who had

visited the dental clinic were of 16-19 years of age group. The study done by de Souza et al¹² shows that majority of study

participants availing Orthodontic treatment belongs to 18-21 years. While the study by Oliveira et al²³ shows that

majority of study participants started the Orthodontic treatment belongs to age group of 20-30 years.

Table 2. Details about the orthodontic treatment availed by study participants

DETAILS ABOUT THE ORTHODONTIC TREATMENT		NUMBER	PERCENTAGE
Q1. Age at which the patient had visited the clinic for the orthodontic treatment			
a)	10-15 years	106	30%
b)	15-20 years	181	52%
c)	more than 20 years	63	18%
Total		350	100%
Q2. Stage of orthodontic treatment when study was started			
a)	0-2 months	58	17%
b)	3-12 months	156	45%
c)	more than 12 months	136	38%
Total		350	100%
Q3. Chief complaint of patients at the time of initial visit?			
a)	Esthetic problem	110	31%
b)	Occlusal Trauma	68	20%
c)	TMJ problem	45	13%
d)	Crowding of teeth	127	36%
Total		350	100%

In the present study majority of study participants availing Orthodontic treatment were females. The results were same as that of shown by study conducted by de Souza et al¹² and Oliveira et al²³.

In the present study, chief complaint of majority of study participants was esthetic problem. The same result was shown by the study by Oliveira et al²³ in which study participants had reported the chief complaint of bad esthetic. In the study conducted by de Souza et al¹² which showed that the major chief complaint of patients seeking Orthodontic treatment was occlusal disturbances.

When the present had started was started, majority of study

participants were having Orthodontic treatment at stage of 3-12 months. While in the study by de Souza et al¹², majority of study participants had finished their Orthodontic treatment.

In the present study expected duration of Orthodontic treatment according to majority of study participants were between one to two years. The same results were shown in studies in Afolabi et al⁶ and Rasool et al²⁴ with expectation of duration of Orthodontic treatment of 2 years. In the present study expected frequency of Orthodontic appointment according to majority of study participants was once in a month. Same result was seen in study conducted by Rasool et al.²⁴ And contrary results were shown in study by

Afolabi et al⁶ in which expected frequency of Orthodontic appointment according to majority of study participants was once in 2 months.

In the present study most of study participants expects very less side-effects of Orthodontic treatment. This is contrary to the results shown by de Souza et al in which the study participant expects various side effects such as pain, Ulcers, Embarrassment with appliances etc.

In the present study majority of study participants expects excellent improvement from Orthodontic treatment, which is similar to study results done by de Souza et al¹² in which majority of study participants expects

very good esthetic, social and psychological improvement.

Table 3. Expectation of study participants from orthodontic treatment.

Q1. What are the expectations from Orthodontic treatment duration?			
a)	More than 2 years	42	12%
b)	1-2 years	233	67%
c)	Less than 1 year	75	21%
Total		350	100%
Q2. What are the expected frequency of appointments			
a)	Once in a week	50	14%
b)	Once in a year	262	75%
c)	Once in six months	38	11%
Total		350	100%
Q3. What types of orthodontic treatment do you expect?			
a)	Very Traumatic	148	42%
b)	less traumatic	102	29%
c)	Conservative	100	29%
Total		350	100%
Q4. How much side effects do you expect from orthodontic treatment?			
a)	Very much	102	29%
b)	Very less	134	38%
c)	No Side effect	114	33%
Total		350	100%
Q5. How much benefits of orthodontic treatment do you expect?			
a)	No improvement	10	3%
b)	less Improvement	151	43%
c)	Excellent Improvement	189	54%
Total		350	100%
Q6. What reaction do you expect from others/public towards your Orthodontic treatment?			
a)	Negative	15	4%
b)	Neutral	186	53%
c)	Positive	149	43%
Total		350	100%
Q7. What do you expect about the attitude of orthodontist?			
a)	Negative	12	3%
b)	Neutral	163	47%
c)	Positive	175	50%
Total		350	100%

In the present study, most of the study participants expect a neutral reaction from others/public towards there Orthodontic treatment, as compared to the results shown by Rasool

et al.²⁴ in his study in which study participants expects positive reaction from others/public towards there Orthodontic treatment.

In the present study most of the study participants finds attitude of Orthodontists to be positive towards their treatment. This is similar to the results reported in the study done by

Rasool et al in which Orthodontist's attitude was supportive and in the study conducted by de Souza et al¹² majority of patient's opinion about Orthodontist was positive attitude in relation to their Orthodontic treatment.

CONCLUSIONS

From above results it was concluded that females and upper middle class according to socioeconomic status scale are more interested in Orthodontic treatment. Expectation of the patients towards Orthodontic treatment and Orthodontist were positive and are satisfied about their treatment. Most of the patients had realistic expectations regarding their Orthodontic treatment which can be fulfilled by the Orthodontists. More studies should be conducted in future to explore reasons effecting the expectation of patients towards Orthodontic treatment.

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