



'Patients' and Parents' expectations of orthodontic treatment in North Maharashtra population – A Questionnaire Study

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Abstract

Face is the one of the most important physical characteristics in the development of self-image and self-esteem. Aesthetics and functional enhancement are some of the common factors for seeking orthodontic treatment. Social norms and external influences including parents are important motivating factors. Often parents are more motivated as compared to their children regarding orthodontic treatment, and expect orthodontic care to provide employment and social advantages to their children. Patients' motivation has a positive correlation with treatment satisfaction on the other hand pain, discomfort, and functional limitations during orthodontic treatment may decrease patient cooperation

Aim: The aim of this questionnaire survey was to compare patients' and parents' expectations before orthodontic treatment in North Maharashtra population.

Settlings and design: A questionnaires consisting of 11 questions was given to the patients and parents who visited the college for the orthodontic treatment

Material and method: One hundred and forty participants [70 patients and one of their parents (n =70) completed a validated questionnaire

Results: Patients expected less of check-up and diagnosis and discussion about treatment, less improvement in their smiles as well as a more dietary restrictions, and social confidence with orthodontic treatment than parents.

Conclusions: Patients and their parents have different expectations from orthodontic treatment. Patient and parent pre-treatment counselling is recommended before initiating the treatment.

Introduction:

The face plays a crucial role in shaping of self-image and self-esteem, with individuals satisfied with their facial appearance generally exhibiting higher confidence and self-esteem. Dissatisfactions often centres around dental concerns more than other facial features, leading many to view orthodontics as a primary treatment option.¹

A study by Phillips et al. reveals that males and females have differing expectations regarding orthodontic treatment. While both genders seek improve self-image and oral function, males express a stronger motivation for social well-being. Gosney's research found that girls

are more concern about spacing, crowding or rotations, and perceive a greater need for braces than boys.¹

Social norms and external influences, including parental expectations, are significant motivators for seeking orthodontic treatment. Parents often display more motivation than their children, anticipating employment and social advantages for their offspring. Patient motivation correlates positively with treatment satisfaction, but pain, discomfort and functional limitations during treatment may decrease cooperation. Studies indicate that only 34% of patients are entirely satisfied post orthodontic treatment, with unrealistic expectations leading to dissatisfaction.²



Previous studies assumed that children's expectations align with their parents, but recent research shows disparities. Understanding patient's expectations aids in education, as informed patients tend to have more realistic expectations and higher satisfaction with treatment outcomes. This approach also identifies patients requiring detailed pretreatment counselling, minimizing dissatisfaction and potential litigation.³

This questionnaire survey aims to evaluate and compare patient's and parent's orthodontic treatment expectations before screening in the North Maharashtra population, shedding light on the dynamics shaping individual's perspectives on orthodontic care.

Material and method:

In this observational cross-sectional study, patients and a parent completed a validated questionnaire before screening at their initial visit to the orthodontic department. Only those patients and parents who provided written informed assent and consent, and who voluntarily and participated, were included in the study. Patients aged 12-18 years with no previous orthodontic treatment, no developmental anomalies (such as cleft lip and/or palate), and no mental or psychological disorders were included. Excluded from the study were patients unwilling to participate or those who did not complete all sections of the questionnaires.

The questionnaire comprised 11 questions. Two questions (1-2) used a visual analogue scale, marked at 1 mm intervals ranging from 1 (extremely unlikely) to 10 (extremely likely), while the remaining eight questions (3-11) used a categorical response code. This questionnaire assessed orthodontic treatment expectations regarding the initial appointment, type of treatment, treatment duration, frequency of visits, and benefits of orthodontic treatment.

Parents received the questionnaire in the waiting room, and patients received it in the clinic, minimizing bias. All participants completed the questionnaire under the supervision of a dental assistant and before receiving any information about orthodontic treatment. Following the questionnaire, patients underwent orthodontic consultation with a postgraduate student at the orthodontic department.

Results:

A total of 140 participants completed the questionnaire. Reproducibility and intra/interobserver reliabilities were high. The mean patient age was 15, with an equal gender

distribution. Parents' mean age was 40, with more male parents. Parents of children undergoing orthodontic treatment reported higher motivation than those with no prior experience.

Patients and parents expected orthodontic treatment for teeth straightening. Patients anticipated improved career opportunities, while parents expected enhanced social confidence. Female patients prioritized improved smile aesthetics. Patients expected better oral hygiene and ease of speech, while parents emphasized initial check – ups, diagnosis and discussion about treatment.

Both patients and parents expected initial oral hygiene checks. Patients expected X-rays and impressions initially. Parents anticipated orthodontic appointments monthly, while patients expected them every 1-2 months. Patients expected a 1-1.5-year treatment duration, while parents expected less than a year. Both groups anticipated treatment to be painful.

Ten patients had a family history of orthodontic treatment, expecting more issues than those without. Patients anticipated more dietary and cleaning problems, while parents expected difficulties in eating. More patients than parents expected a negative impact on their appearance.

Discussion:

In previous studies, it was observed that expectations from orthodontic treatment differed between parents and patients. Straightening teeth was the primary reason for undergoing orthodontic treatment. This present study revealed that aligned teeth led parents to expect increase social confidence, while patients anticipated improved career prospects.

Regarding the initial visits, both patients and parents expected check-up, diagnosis, treatment discussion, and oral prophylaxis in similar percentages. However, a U.K. study by Michelogiannakis et al. found that more patients than parents expected less check-up, diagnosis and treatment discussion at the initial visit.

Patients whose family members have undergone orthodontic treatment before expected fewer braces at their initial appointment, more tooth extractions, and eating related issues. They were also more knowledgeable about appointment duration and frequency. Patients anticipated a 1-1.5-year treatment duration, while parents expected less than a year.

About 70% of parents and patients expected discomfort while eating, and both groups anticipated eating and drinking restrictions during orthodontic treatment.



Cleaning tooth with braces was expected to be problematic by both the parties.

Bernabe' et al. noted that orthodontic treatment occasionally results in discomfort, pain, and functional limitations. Approximately 48% of participants in the

present study (both parents and patients) expected orthodontic to be painful.

A significant concern was the impact of metal braces on appearance, with 76% of patients fearing a negative effect on their looks, potentially influencing their decision to undergo orthodontic treatment.

1. Your expectations from orthodontic treatment:

	Patients (N=60) Mean (SD)	Parents (N=60) Mean (SD)	P value
1. Straighten teeth	8.2 (0.84)	8.3 (0.7)	p =0.843 (NS)
2. Produce better smile	7.73 (1.08)	6.76 (0.85)	p =0.042*
3. Make it easier to eat	4.53 (1.33)	4.33 (1.21)	p =0.217 (NS)
4. Make it easier to speak	4.33 (0.84)	3.7 (0.83)	p =0.026*
5. Make it easier to keep teeth clean	4.86 (1.4)	4.36 (1.06)	p =0.193 (NS)
6. Improve my chances of good career	8.23 (0.62)	7.06 (0.82)	p =0.036*
7. Give confidence socially	7.3 (0.87)	8.26 (0.94)	p =0.054 (NS)

p> 0.05 – No significant difference (NS)

*p<0.05 – significant difference

2. Your expectations at your initial visit:

	Patients (N=60) Mean (SD)	Parents (N=60) Mean (SD)	p value
1. Have check -up and diagnosis	7.6 (0.81)	7.4 (0.81)	p =0.416 (NS)
2. Have a discussion about treatment	7.6 (0.81)	7.8 (0.71)	p =0.358 (NS)
3. Have oral hygiene checked	4.53 (0.77)	4.53 (1.47)	P =0.915 (NS)
4. Have a -ray	4.13 (0.77)	4.33 (1.29)	P = 0.637 (NS)
5. Take a impression	3.96 (0.76)	3.76 (0.93)	p = 0.368 (NS)
6. Have braces fitted	8.46 (0.73)	8.26 (0.63)	P =0.713 (NS)

p> 0.05 – No significant difference (NS)

*p<0.05 – significant difference

3. Any family history of orthodontic treatment



	Patients N (%)	Parents N (%)
Yes	20 (33.3%)	18 (30%)
No	40 (66.6%)	42 (70%)
	Chi square test value = 1.734, p = 0.612 (NS)	

p > 0.05 – No significant difference (NS)

*p < 0.05 – significant difference

4. Expectation with respect to frequency of the orthodontic treatment

	Patients N (%)	Parents N (%)
< 1 month	14 (23.3%)	42 (70%)
1-2 month	38 (63.3%)	16 (26.6%)
>2-3 month	6 (10%)	2 (3.3%)
>3 -6 month	2 (3.3 %)	0 (0%)
>6 month	0 (0%)	0 (0%)
Don't know	0 (0%)	0 (0%)
	Chi square test value = 34.98, p = 0.003*	

p > 0.05 – No significant difference (NS)

*p < 0.05 – significant difference

5. Expectation regarding the duration of the orthodontic treatment



	Frequency (n)	Percentage (%)
< 1 year	12 (20%)	36 (60%)
1-1.5 year	30 (50%)	20 (40%)
1.6 – 2 year	14 (23.3%)	4 (8%)
2-3 year	4 (6.6%)	0 (0%)
≥ 3 year	0 (0%)	0 (0%)
Don't know	0 (0%)	0 (0%)
Chi square test value = 19.32, p=0.026*		

p> 0.05 – No significant difference (NS)

*p<0.05 – significant difference

6. Orthodontic treatment affecting day to day activities

	Patients N (%)	Parents N (%)	Chi square test	P value
1. Think braces are painful	44 (73.3%)	48 (80%)	Chi = 1.852	p =0.512 (NS)
2. Think extraction of teeth is required for orthodontic treatment	26 (43.3%)	20 (33.3%)	Chi = 2.458	p = 0.298 (NS)
3. Ortho treatment will give problems while eating	16 (26.7%)	42 (70%)	Chi = 12.476	p = 0.004*
4. Ortho treatment will restrict eating and drinking	42 (70%)	20 (33.3%)	Chi = 9.021	p =0.017*
5. Cleaning of teeth is problem with braces	46 (76.7%)	40 (66.6%)	Chi = 2.651	p = 0.215 (NS)
6. Presence of braces will lower your appearance	46 (76.7%)	10 (16.6%)	Chi = 14.981	p =0.001*

p> 0.05 – no significant difference (NS)

*p< 0.05 – significant difference in opinion

Conclusion:

Expectation of the orthodontic treatment differs significantly between parents and patient in the North Maharashtra population.

From a clinical point of view patient and parent pre-treatment counselling is recommended with respect to the diagnostic procedures, potential challenges associated with orthodontic treatment, frequency of

orthodontic follow-up visits, and the total treatment duration.

Supplementary materials:

Table S1; Your expectations from orthodontic treatment

Table S2; Your expectations at your initial visit

Table S3; Any family history of orthodontic treatment?

Table S4; Expectation with respect to frequency of the orthodontic treatment



Table S5: Expectation regarding the duration of the orthodontic treatment

Table S6: Orthodontic treatment affecting day to day activities

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