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Original Research Article

Patients perception of orthodontic treatment - A questionnaire based study

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ABSTRACT

Introduction: The patient perception of malocclusion is important in determining orthodontic treatment. The purpose of this study was to determine participant's perception, attitude, dental awareness, motivation, factors influencing the necessity of treatment and considerations before opting for orthodontic treatment.

Materials and Methods: A questionnaire-based survey including 14 questions, was conducted for 160 participants who came to OPD of Department of Orthodontics, BBDCODS or at private clinics for any dental problem or those who had queries for orthodontic treatment.

A google form with multiple choice questions was created to assess the patient's perception of Orthodontic treatment to investigate aesthetic concern, functional problems, psychological concern, Orthodontic awareness, and other reasons for seeking orthodontic treatment.

The data of responses of participants was analysed on google form application itself with the help of spread sheet, pie charts and graphs.

Results: The study revealed that aesthetics was the main concern for getting treatment whereas functional concern was less frequently reported. Patient believed that the treatment could make them more beautiful.

Conclusion: This survey-based questionnaire helped in assessing the patient perception and attitude towards Orthodontic treatment. Aesthetic was the major issue for seeking orthodontic treatment, and also motivating factor for the start of treatment. Cost and duration of the treatment were major barrier for the start of the orthodontic treatment.

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1. Introduction

An individual wants to improve facial, dental and smile appearance for aesthetic concern. This is the main reason for seeking orthodontic treatment, however, functional, social, and psychological concern also motivates patient to seek orthodontic treatment. Functional concern includes difficulties in chewing, eating, speech or TMJ problems. Psychological concerns are related to lack of self-confidence and self-esteem of an individual because of their facial appearance. As an orthodontist, if we understand patient

perception for orthodontic treatment, we can motivate them for the treatment in a more convincing manner.

In today's scenario, there is lots of information about dental as well as orthodontic treatment available on internet, social media, books etc. Information could also be taken from dentists or awareness posters in dental clinic which helps the patients to understand, that orthodontic therapy can improve their quality of life. Opting and undergoing orthodontic treatment is a complex process involving a combination of aesthetic, psychological, functional, social, and economic aspects.¹⁻⁵

Hence the responses to this questionnaire-based survey would be helpful in influencing and motivating the patients

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and make them psychologically strong to cope with pain and discomfort during treatment. Also, the information achieved from the study can be helpful to orthodontists to understand the barriers for undergoing orthodontic treatment from patient's point of view.

For good result and success of orthodontic therapy patients should be self-motivated or internally motivated which help further in cooperation and punctuality of appointment for the best outcome of treatment result.

Despite of realisation of need of orthodontic treatment by patient, they experience certain constraints as related to knowledge and perception for pursuing orthodontic treatment. This questionnaire- based study will help us in getting answers to such questions.

Considering this the aim of the study was to determine, participant's perception, attitude, dental awareness, motivation, factors influencing the necessity of treatment and considerations before opting for orthodontic treatment.⁶⁻⁹

2. Materials and Methods

A google form for the questionnaire-based study was created to assess the patient's perception for orthodontic treatment. The questionnaire included 14 questions, that were mix of multiple choices and check box type questions involving aesthetic, functional, and psychological concern for undergoing orthodontic treatment, factors influencing the desire for orthodontic treatment, awareness among the patients and other queries that commonly affect their decision before beginning their treatment.

The questionnaire was circulated through various social media platforms, to be filled by participants who came to OPD of Department of Orthodontics of our college, as well as other dental clinics for any treatment or those who had a query about braces of teeth or orthodontic treatment.

2.1. Inclusion criteria

1. All subjects above 18 years of age.
2. All subjects were willing to participate in the study.
3. All subject who had any orthodontic problems or queries related to same.

2.2. Exclusion criteria

The subjects who had undergone previous Orthodontic or Orthodontic surgical treatment.

The responses submitted by participants were obtained on the spread sheet. Data was tabulated for each question and results were interpreted on percentage basis and are mentioned in the table. The pie chart and graphs are also generated for easier interpretation.

We have tabulated a table with % of the options for the questions of the Questionnaire (Table 1)

3. Results

Results of the study showed that most of the participants (59.4%) were self-aware about their dental and smile appearance, 23.2% participants accepted that family and relatives brought them notice about their appearance of teeth.

Aesthetic was the most common reason (56.8%) for seeking orthodontic treatment, however 18.7% participants also admitted social influence as a reason for seeking orthodontic treatment.

Surprisingly, 98.1% participants were aware that their problems can be corrected but only 12.3% participants know that orthodontist will be the specialist for correcting malocclusion and most of them (45.9%) also assume that early teen is the right age to get orthodontic treatment.

Mixed responses were obtained about knowledge of options available for orthodontic treatment.

Prolonged duration of orthodontic treatment was admitted as most common barrier for opting orthodontic treatment by 66% of the participants.62.9% participants responded themselves as self-motivated for undergoing orthodontic treatment.

Clinical experience of an orthodontist was found most important consideration by 71.6% participants for choosing them as their treating orthodontist.

4. Discussion

Patients' perception for orthodontic treatment was interpreted through this survey. As noted in our present study as well as in previous studies,^{1,2,9} subjects reported their aesthetic problem by themselves as the major concern for seeking orthodontic treatment. Different population groups were targeted in these studies like American, Turkish and Saudi Arab studies. (Figure 1)

Lakshmi et al in their study found that in south Indian population subjects of age group (15-25 years) were concerned about physical attractiveness to gain social acceptability.^{4,10}

In previous study by Brumini et al,¹⁰ parental influence was also a contributing factor for seeking orthodontic treatment however we included only adult subjects and children, and parents of minor children were not the participants.

Febelman et al¹ found the aesthetic concern was almost equal in males (59.4%) and females (58.4%) for seeking orthodontic treatment, however we did not divide our sample as per gender.

Table 1: Results generated from google application for the survey

Questions	Options	Percentage
1. Who brought to your notice about smile and appearance of teeth?	Self	59.4%
	Family/Relative	23.2%
	General Dentist	
	Friends/Colleagues	9.7%
2. What is the main reason for seeking orthodontic treatment?	Aesthetic problem	56.8%
	Problem in eating and chewing	23.9%
	Psychological problem	0.6%
	Social concern	18.7%
3. What is your main concern related to teeth during smile?	a. Forwardly placed teeth	41.9%
	b. Crowding/ rotated teeth	19.4%
	c. Spacing between teeth	21.9%
	d. Forwardly/ Backwardly placed upper and lower jaws	16.8%
4. What is your main concern during various function related to mouth?	a. Eating and chewing	56.3%
	b. Thrusting of Tongue between teeth.	17.8%
	c. Mouth breathing habit	17%
	d. Pain & clicking during opening and closing of Jaws.	21.5%
	e. Difficulty in pronunciation of certain words.	24.4%
5. Are you aware that the above problems can be corrected ?	a. Yes	98.1%
	b. No	1.9%
6. If Yes, do you know who will handle this problem?	a. General Dentist	84.5%
	b. Orthodontist	12.3%
	c. Other Dental Specialist.	3.2%
7. What are the sources of information about orthodontic treatment?	a. Person	21.8%
	b. Medical and dental website	23.1%
	c. Books	19.2%
	d. Social media	15.4%
	e. Dentist	68.6%
8. Do you know what is the right age to get braces (Orthodontic treatment)?	a. Young child	13.2%
	b. Early Teens	45.9%
	c. Late Teens	17.6%
	d. Adult	10.1%
	e. At any age	34%
9. Are you aware various options available for orthodontic treatment?	a. Removable plates.	12.3%
	b. Fixed by metallic bracket.	27.9%
	c. Fixed by tooth-coloured braces.	17.5%
	d. Invisible braces	19.5%
	e. None	7.1%
	f. All	63%
10. What are the myths and doubts about the orthodontic treatment?	a. Treatment is painful	37.9%

Continued on next page

Table 1 continued

	b. Treatment duration is long	50.3%
	c. Extraction of teeth cause blindness	36.6%
	d. Fear of losing healthy natural teeth when asked to undergo for extraction	41.2%
11. What are the barriers before starting the treatment?	a. Cost	57.7%
	b. Duration of treatment	66%
	c. Orthodontic treatment is not covered in insurance	16.7%
	d. Location and transportation	14.7%
	e. Any other please mention	7.1%
12. What is your thought that related you to take orthodontic care?	a. Lowered social attractiveness	35.1%
	b. Lack of self confidence	37.1%
	c. Unsatisfactory career options	11.9%
	d. Low aesthetic and functional efficiency	45.7%
13. What is your motivation to undergo orthodontic treatment?	a. Peer pressure	13.2%
	b. Self-motivation	62.9%
	c. Parental pressure	8.6%
	d. Difficulty in carrying out function	20.5%
	e. Professional/ Personal	23.2%
	f. I am happy as I don't need	0.7%
14. What was the criteria for choosing your current orthodontist?	a. Orthodontist' reputation	40.6%
	b. Clinical experience of Orthodontist (in years)	71.6%
	c. Treatment cost	37.4%
	d. Location and transportation.	16.8%
	e. Others	9.7%

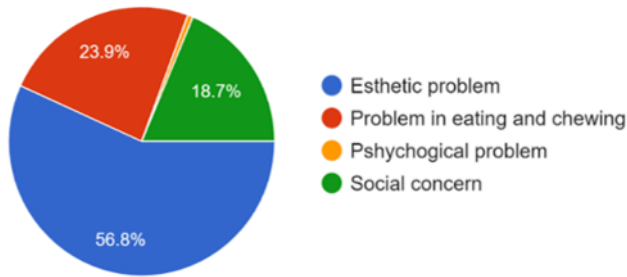


Figure 1: Responses regarding main concern for Orthodontic treatment

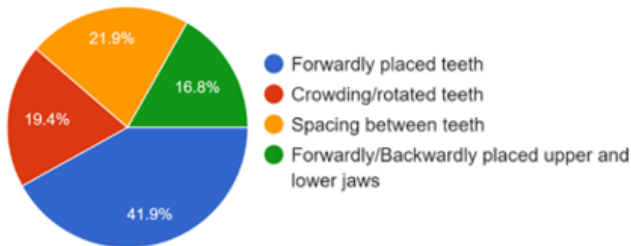


Figure 2: Responses to main concern related to teeth during smile

Forwardly placed, crowding and spacing were most common reasons to seek orthodontic treatment in comparison to functional problems as also seen in studies by Felemban et al,¹ Feldens et al,¹¹ Fawzan et al.¹² (Figure 2)

A similar pattern of results was seen in study by Tuncer C. and Laothong W.^{2,5} where they also mentioned that functional problems like difficulty in chewing and biting were strongly reported functional concern. Besides this, other functional problems in our study were difficulty in pronunciation of certain words, pain and clicking in jaw, mouth breathing, and tongue thrusting habit in small percentage of people. (Figure 3)

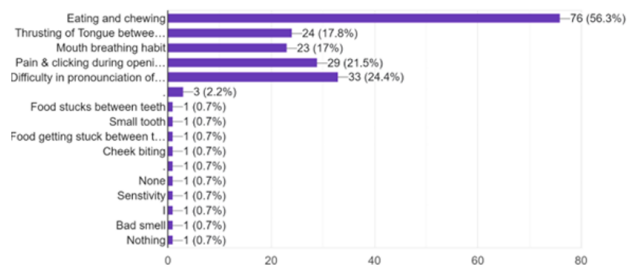


Figure 3: Responses to main concern during various function related to mouth

Majority of patients knew that about these dental problems could be corrected but they were unaware

about specialised Orthodontic branch and the fact that Orthodontist deals with these problems. (Figure 4)

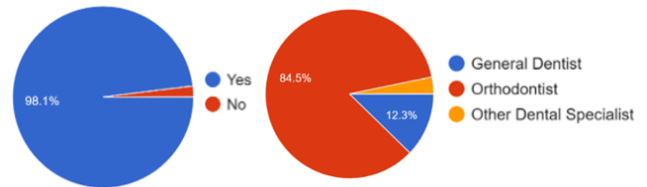


Figure 4: Responses to the awareness of the problems and who will handle their problem

Most of previous studies also came up with the finding that general dentists were major source of information. (Figure 5)

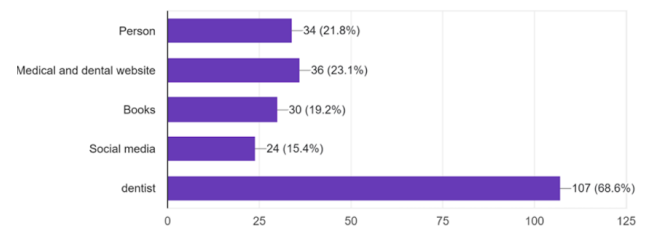


Figure 5: Responses to source of information.

Febelman reported parents of young children were educated by paediatric dentist in Saudi Arab population whereas adults seek information from the general dentists.¹

Muthu L, Ingervall and Hedgevard (1974) found that awareness and desire to receive orthodontic treatment vary with age.

In our society majority of the patients were unaware of the fact that orthodontic treatment can be done in adults. They knew that it can be done only in children and early teens. (Figure 6)

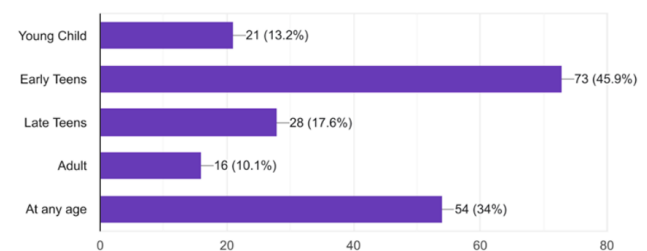


Figure 6: Responses to participants unaware about the right age for the start of the orthodontic treatment.

There was mixed response about availability of various treatment options, but majority of participants knew that only wire and metallic braces can correct the malalignment of teeth. (Figure 7)

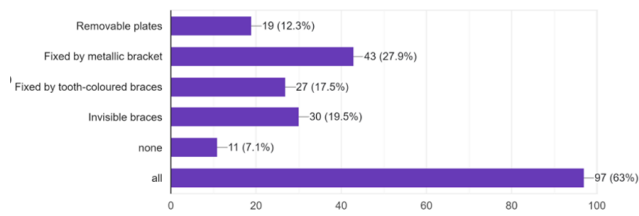


Figure 7: Responses about availability of various treatment options

Most of participants felt that prolonged duration of treatment was the main barrier for the start of treatment, although it will vary from mild to severe cases, so it's our responsibility to explain them about duration before beginning of treatment in order to prevent losing their motivation.(Figure 8)

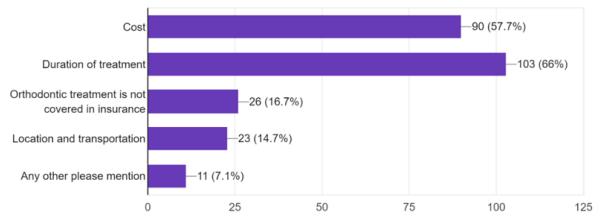


Figure 8: Responses to barriers before starting the treatment.

Cost is the second more common barrier for start of the orthodontic treatment. Affordability is low in developing countries like India due to high orthodontic treatment expenses and it is not covered by insurance policies of India. So, this highlight the need of coverage of orthodontic treatment in insurance policies, it also provides an insight that our dental issue was taken lightly by our national health schemes.

This issue of cost is partly taken care by orthodontist as well as our governing system, and provide Orthodontic treatment at reasonable cost in government and private dental colleges.

These responses of the survey guide us to the need of spreading awareness about options available in orthodontics, and need to explain that time needed for correction in orthodontics and duration may vary from mild to severe cases.

There are certain myths and doubts about Orthodontic treatment as patients are afraid of pain, discomfort and loosening of teeth and extraction can affect their eyesight so we should explain this misconception by organising dental awareness camps and by public seminars as suggested in studies by Tuncer C. et al and Laothong W. et al.^{2,5} (Figure 9)

However, Orthodontist's experience and reputation were among the strongest factor that positively motivated their decision to choose orthodontist.(Figure 10)

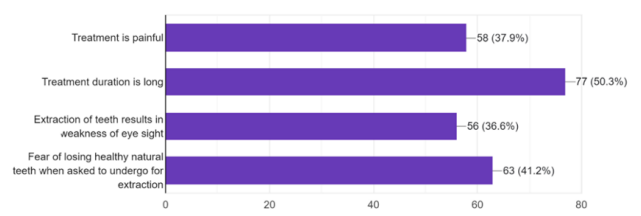


Figure 9: Responses to various myths and doubts about the orthodontic treatment.

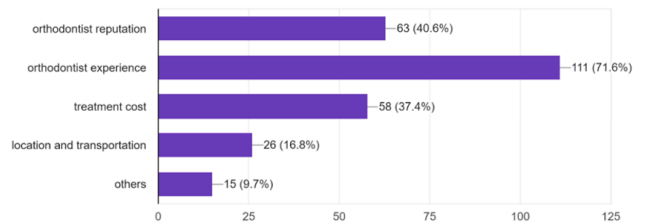


Figure 10: Responses to the criteria for choosing current orthodontist.

The successful practice of orthodontics is significantly dependent on patients' self-motivation, Orthodontics is main need of our society as we are lagging in explaining prospective of dentistry to general population.^{13–17}

Within the limitations of the present study, various facts cleared about perception of subjects towards orthodontic treatment were that aesthetics was the major concern as noticed by self, followed by functional issues, patient were less aware of the scope of orthodontics in adults, specialized orthodontist do this procedure, various option available in orthodontics. General dentist plays an important role in educating the patients coming to them regarding orthodontic treatment as curriculum at undergraduate level should stress on diagnosis and treatment options available in orthodontics for spreading awareness later in their career.

5. Conclusion

1. Aesthetic was the main concern for necessity of orthodontic treatment.
2. General dentist was the major source of information about Orthodontics.
3. Treatment cost and duration of orthodontic treatment were the common barrier for not undergoing orthodontic treatment.
4. The clinical experience of Orthodontist was the main factor for choosing them as their treating Orthodontist.

6. Source of Funding

None.

7. Conflict of Interest

None.

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