

# COMMON CHIEF COMPLAINT OF PATIENT SEEKING ORTHODONTIC TREATMENT

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## ABSTRACT:

In the earlier days orthodontics was more focused towards rectifying a malocclusion. But nowadays there is a shift towards maintaining the balance between functional efficiency, structural balance and esthetic harmony. Understanding the perspective of a patient's orthodontic treatment needs helps in better treatment planning. The aim of this study was to identify the major chief complaint of the patient seeking orthodontic treatment. In this retrospective study records of 900 patients undergoing Orthodontic treatment were obtained. Their chief complaints were screened and were classified into esthetics, pain and functional. Esthetics chief complaints were further subdivided into crowding, proclination and spacing. Results showed that majority of the patients seek orthodontic treatment for esthetic reasons. Among esthetics crowding was found to be the major chief complaint, followed by proclination and spacing.

**KEY WORDS:** Chief complaint, Crowding, Proclination, spacing.

## INTRODUCTION:

In the earlier days the orthodontist's primary goal was to rectify the Malocclusion. With time this goal was shifted towards achieving an Ideal facial esthetics. Edward Angle<sup>1</sup> believed classic Greek profile of Apollo Belvedere as Ideal and every orthodontist should strive to achieve it. Several cephalometric analyses and measurements to achieve a aesthetically pleasing face were defined, but the concept of Ideal esthetics is very subjective and varies with patient's demand. Jaksons triad maintaining the balance between functional efficiency, structural balance and esthetic harmony fits better in current orthodontic scenario. Recently more emphasis is given toward form and function of the occlusion and its stability. Many studies have shown that problems associated with malocclusion such as traumatic occlusion, temporomandibular joint pain, periodontal disease and caries might resolve after orthodontic therapy.<sup>2,3</sup>

Importance of Patients' perception of quality of care were given more focus in recent times.<sup>4,5</sup> A good Orthodontic treatment planning should not only achieve the orthodontic treatment goal but also should satisfy the patient's primary needs. With regards to Patients satisfaction high level of satisfaction was found in dental care when compared to medical care.<sup>6</sup> Responding to the patient's subjective need also reduces the barriers to Orthodontic treatment. To achieve the overall goal, the patient's subjective demands had to be correlated with the Orthodontic diagnosis to achieve a treatment plan. Previously our team had

conducted numerous clinical trials <sup>7-13</sup> and lab animal studies <sup>14-18</sup> and in-vitro <sup>19-21</sup> studies over the past 5 years. Now we are focussing on epidemiological studies. The idea for this study stemmed from the current interest in our community. The aim of this study is to identify the major chief complaint of the patient seeking orthodontic treatment.

#### **MATERIALS AND METHOD:**

This was a Retrospective study in which details of patients undergoing orthodontic treatment between March 2019-2020 were collected from our hospital records. A total of 900 Patients records were collected from our data base. All the patient had consented towards usage of records towards research purposes. Ethical committee approval was obtained for screening patients records from the Institutional Ethical board. Chief complaints of all the patients in their own words were recorded in our database during their Initial visit were obtained.

Patients below the age of 18 years were excluded from the study in an effort to involve only the patient's own perspective of treatment needs without the peer and parents influence. Demographic Information of the patient including the age and gender of the patients were also noted to observe any variation. Records with incomplete Data were excluded from the study. After going through the records, the chief complaints of the patients were classified into esthetics, pain and functional. Esthetics chief complaints were further subdivided into crowding, proclination and spacing. All the data was tabulated and entered into SPSS software version 20 and descriptive analysis was done.

#### **RESULTS AND DISCUSSION:**

A total of 877 participants were included in the study out of which 407 records belonged to males and 470 records belonged to females. Figure-1 shows distribution of various chief complaints observed among orthodontic patients, majority of the patient seeking treatment was for esthetic reasons about 81.1%, about 11.1% for functional reasons and 7.7% for Pain. Figure-2 shows distribution of various chief complaint based on esthetics among orthodontic patients. A significant percentage of patients 64% had the chief complaint of crowding, about 32% seeked treatment for proclination and 4% was for spacing. Figure 3 depicts the bar graph representing the association of various chief complaints and gender. Chi-square test was done and the association was found to be statistically insignificant. Pearson's Chi square test value: 3.80, DF: 2, p value: 0.149 (>0.05) hence statistically insignificant.

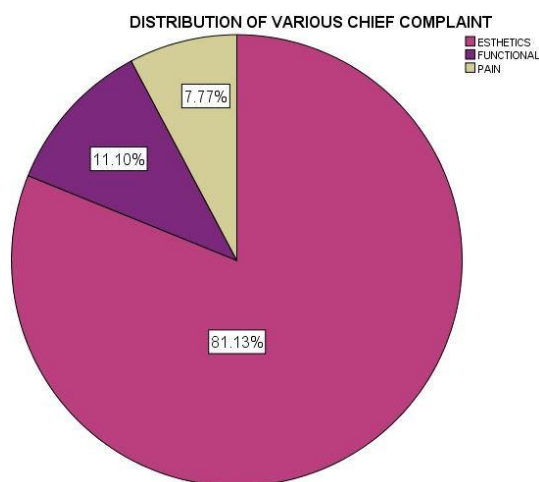


Figure 1: shows the distribution of various chief complaints among orthodontic patients. About 81.1% patient sought orthodontics treatment for esthetic reasons, 11.1% for functional reasons and 7.7% for Pain

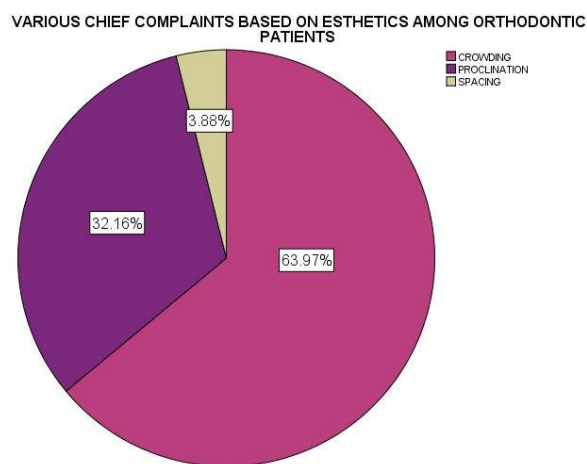


Figure 2: Distribution of various chief complaints based on esthetics among patients undergoing orthodontic treatment. About 64% had the chief complaint of crowding, about 32% sought treatment for proclination and 4% was for spacing.

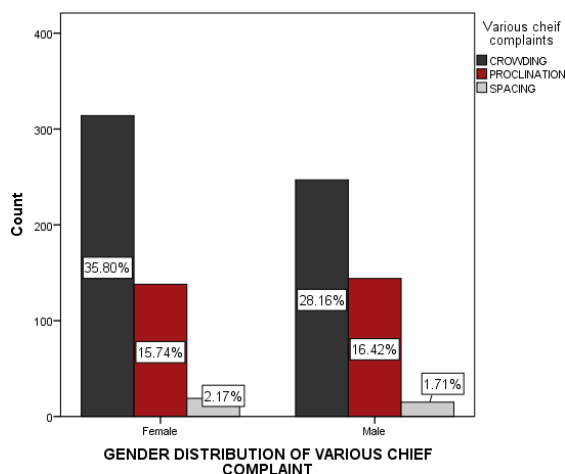


Figure 3: The bar graph represents the association of various chief complaints and gender. The X-axis represents the gender and the Y axis represents the various chief complaints reported based on esthetics. Majority of the females were reported with crowding as chief complaint. Chi-square test was done and the association was found to be statistically not significant. Pearson's Chi square test value: 3.80, DF: 2, p value: 0.149 (>0.05) hence statistically not significant. It could be inferred from the graph that both male and females had crowding as the common chief complaint.

We found that almost all our patients majorly reported for Esthetic 82% reasons and only a smaller percentage of patients reported for Functional 9.4% and pain 8.2%. In a study by Gosney et al<sup>22</sup> showed similar results with Aesthetic 65% accounting as a major reason for patient seeking orthodontic treatment. In a questionnaire study conducted by Ahmed Al Fawzan et al.<sup>23</sup> showed that esthetics accounted for 86% of patient seeking orthodontic treatment, followed by to Improve dental health by 7% and to Improve

chewing -speech 1%. Shaw et al<sup>24</sup> in a Prospective Study showed similar result with Aesthetics 58% as the major reason for patient seeking orthodontic treatment.<sup>24</sup> Similar studies conducted by Ambrizzi et al<sup>25</sup>, Lew et al.<sup>26</sup>, Walley et al<sup>27</sup> showed Esthetics as the major reason for patient seeking orthodontic treatment. The only contradictory evidence found in literature was a study conducted by Souza et al<sup>28</sup> who showed that Occlusal deviation 66.7% as the major reason for patients seeking orthodontic treatment and Aesthetic comparatively less 48%.

The percentage of females seeking orthodontic treatment was not significantly higher 53% than males 46% in the current study. Shaw et al<sup>24</sup> in their study showed a higher percentage of females 68% than males.

The results of our present study revealed that the major reason for patients seeking Orthodontic treatment was esthetics, among esthetic reasons crowding accounted for majority 64% followed by proclination 32% and the least for spacing 4%. In a questionnaire study by Bergstrom et al<sup>29</sup> showed that minor crowding accounted for 77% of the common chief complaint of Orthodontic patients. Ingervall et al<sup>30</sup> in study showed similar results with Crowding 38%, spacing 13%, projecting 11%.

Influence of other parameters on the patient's chief complaint were also analysed by other Authors such as Burden et al.<sup>31</sup> influence of peers 75%. Baldwin et al.<sup>32</sup> categorised the influencing factor as Identification factor 36% and Displacement factor 37%.

The limitations of this study include its Retrospective study design and its not performed in a Multicentric basis. The Future scope involves a prospective study design with both subjective and objective Treatment needs comparison and other parameters simultaneously assessed.

## **CONCLUSION:**

Within the limitations of this study it can be concluded that the majority of the patients seek orthodontic treatment for esthetic reasons. Among esthetics crowding was found to be the major chief complaint, followed by proclination and spacing.

## **ACKNOWLEDGEMENTS:**

All the authors had equal contribution in the study.

## **CONFLICT OF INTEREST:**

There are no conflicts of interest.

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