

# Expectations of Patients Receiving Orthodontic Treatment from Saidu College of Dentistry Swat: A Cross Sectional Study



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**OBJECTIVE:** The aim of this study was to assess the anticipations of orthodontic treatment held by both patients and parents. This would enable the provision of optimal services for expectations that are rational, while also facilitating discussions or guidance for expectations that are impractical. One of the key goals of healthcare systems today is to meet patient expectations. The declaration of a patient's desires is significant because healthcare providers frequently undervalue their need for treatment. When a clinician is aware of patient demands, they are better equipped to meet the patient's realistic expectations while explaining the least possibility to fulfil arbitrary expectations, thus results in more rewarding therapeutic interventions.

**METHODOLOGY:** The data collection process involved the utilization of a non-randomized sampling technique, specifically selecting 300 participants as determined through Epi info using a structured form. The study focused on recruiting new patients who exhibited internal motivation, along with anatomical or morphological issues related to their teeth or jaws. A prior history of orthodontic treatment was an exclusion criterion. Participants with craniofacial syndromes or malformations, as well as those dealing with mental or psychological health conditions, were excluded from the research.

**RESULTS:** In total, 300 individuals were examined, with 170 females and 130 males. Improvement in facial appearance was the most popular reason for seeking orthodontic treatment (180 patients out of 300), although other functions like mastication, better oral health and communication were mentioned by 120 patients. 70% (210) had a thought, since they would receive treatment, they would be more accepted by society and thus improve their social standing, while the remaining 30% (90) thought that it would have no difference.

**CONCLUSION:** Essentially, expectations from orthodontic interventions among patients are quite uniform, although males generally display more practical perceptions regarding treatment duration and the initial appointment. However, when it comes to dietary and beverage restrictions during orthodontic treatment, patient expectations differ from those held by their parents.

**KEYWORDS:** Patient expectations, orthodontics, Evaluate.

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## INTRODUCTION

A crucial goal of advanced healthcare systems is to fulfill patient expectations.<sup>1</sup> The articulation of a patient's desires from orthodontic treatment is of considerable significance, as healthcare providers often underestimate the extent of their treatment needs.<sup>2</sup> When a

clinician possesses knowledge of a patient's requirements, chances become optimal that they would address the patient's rational expectations and initiate open discussions concerning idealistic hopes thereby fostering more productive therapeutic dialogues.<sup>3</sup> The comprehension of oral health care necessities, patient contentment towards treatment and the overall perception of healthcare system, all hinge on the evaluation of patients' expectations.<sup>4</sup> Discrepancies between patient anticipations towards delivered services are associated with diminished satisfaction.<sup>5</sup>

The primary objectives of orthodontic treatment should focus upon achieving favorable treatment outcomes, ensuring patient satisfaction while sustaining reasonable costs.<sup>6</sup> To achieve this aim, it is critical to use patient surveys, interviews and professional clinical evaluations to meticulously assess

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and thus document the quality of care.<sup>7</sup> Patients with unrealistically high expectations may not be satisfied with even the best care, while those with unrealistically low expectations might be content with subpar care.<sup>8</sup> Focusing on the psychological aspects of adult patients, several studies demonstrate that these individuals are more conscious of their malocclusion, leading to extremely high expectations for the outcomes of their therapy.<sup>9</sup> It is essential for orthodontists to research and understand the expectations, challenges, and motivations of this expanding population to provide more effective treatment that addresses their concerns.<sup>10</sup>

Despite the increased popularity, adult orthodontic treatment is not a recent development. Originally mentioned by Pierre Fauchard, who wrote the first book on scientific dentistry, "Le Chirurgien Dentiste,"<sup>11</sup> published in 1723, it has been a part of dental care provision for over centuries. In a study involving 200 adult patients aimed to determine the factors that initially led them to reject the idea of receiving orthodontic treatment. Researchers identified factors with the greatest to lowest prevalence, including a lengthy treatment period, discomfort from wearing orthodontic equipment, rejection of the brackets' unattractive appearance, worries about pain and anxiety over being disappointed with the treatment's outcome.<sup>12</sup>

Due to the availability of limited national research data over the expectations of patients before and after orthodontic treatment, we expect this study would be remarkable and would highlight the underlying factors providing valuable insights for orthodontists to better comprehend what patients expect while choosing for years long orthodontic treatment.

## METHODOLOGY

This cross-sectional study was conducted at the Orthodontics Department of Saidu College of Dentistry, Swat, from June 19, 2023, to August 17, 2023, following approval from the Ethics Review Board (ERB) with the reference number 71-ERB/023. A non-randomized sampling technique was employed to collect the required data, specifically for 300 participants determined using Epi info on a structured performa.<sup>13</sup> New patients who were internally motivated, had anatomical or morphological problems with their teeth or jaws and had never received orthodontic treatment before were included in the study. However, patients with craniofacial syndromes or malformations, as well as those who were mentally or psychologically unwell, were excluded from the research. A self-designed study questionnaire was developed after performing a detailed literature search. Content of questionnaire was validated by other field expert who was not part of this study. Moreover,

a pilot study was performed on 30 patients to see the applicability of questionnaire on targeted population. Study questionnaire evaluated only participants' expectation and did not use a specific scale so cronbach alpha was not calculated as a reliability measure. After doing the pilot, the questionnaire was finalized.

Data were entered and analyzed using SPSS version 24.0. Descriptive statistics were computed, including the mean age and the male-to-female ratio of the patients. A p-value of < 0.05 was considered significant.

## RESULTS

Among 300 individuals (170-female and 130-male), Improvement in facial appearance was the most popular reason for seeking orthodontic treatment (180/300), although other functions like mastication, better oral health and communication were also mentioned by 120 patients (Table 1).

**Table 1:** Most common reasons for seeking orthodontic treatment

Variable	N (%)
Improved facial appearance	180 (60)
Improved facial appearance and oral functions	100 (33)
Improved facial appearance and dental health	20 (7)
Total	300 (100)

Additionally, questions on the patient's awareness of the oral issue and desire for orthodontic treatment were posed. The results are shown in table 2.

**Table 2:** Patients attitude towards treatment

Variable	N (%)
Patients awareness about dental problem, and interest in treatment	210 (70)
Patient is highly motivated for treatment	49 (16.4)
Patients is fully aware of dental problems and antagonistic to treatment	31 (10.3)
Patient have no idea about why the treatment was started/advised	10 (3.3)
Total	300 (100)

Table 3 listed the patient expectations for orthodontic therapy, only 12 patients anticipated that receiving orthodontic treatment would enhance their quality of life. The majority of them believed that by enhancing their dental health and looks, they could get more social acceptance in the future.

**Table 3:** Expectation regarding social life

Variables	N (%)
Patients improved quality of life	141(47)
Improved status in society	39 (13)
Improved social acceptance	30 (10)
Treatment have no effect	90 (30%)
Total	300 (100)

While 70% (210) thought that they would receive treatment, they would be more accepted by society and thus would improve their social standing, while the remaining 30% (90) thought that it made no difference.

The results of the second portion of the questionnaire showed that the majority of patients thought that either the treatment's results met or, at the very least, exceeded their expectations, only 3% (09) people thought the effort was too great compared to the result, but no one expressed complete dissatisfaction (Table 4).

**Table 4 :** Patients satisfaction with treatment results

Variables	N (%)
Very satisfied	271 (90.3)
Satisfied	20 (60.7)
Effort exceed in relation to outcome	9 (3)
Dissatisfied	0 (0)
Total	300 (100)

80% (240) of the patients said that their loved ones had given them encouragement or were thrilled with the treatment's results. The remaining 20% (60) individuals reported no specific response from those close to them (Table 5).

**Table 5:** Response on treatment by near ones

Variable	N (%)
Positive response by near ones	240 (80)
No response	60 (20)
Total	300 (100)

## DISCUSSION

The high response rate in our study suggests that patients generally held a positive outlook and were willing to cooperate. Notably, a previous study indicated that both children and parents exhibited similar expectations for orthodontic treatment,<sup>14</sup> reinforcing the importance of understanding the perspectives of both groups. In our cohort,

a significant portion of patients and parents did not have specific expectations regarding orthodontic therapy. Interestingly, the anticipation of having an orthodontic appliance placed at the first appointment was lower among parents compared to participants.

However, common expectations included foreseeing pain, discomfort and challenges in speaking, chewing, and maintaining oral hygiene with fixed orthodontic appliances, aligning with findings reported by Miao et al. Moreover, male participants expressed significantly greater expectations of dietary restrictions during orthodontic treatment compared to their female counterparts. This discrepancy may be attributed to a general tendency for men to be less attentive to such constraints.

Strunga et al. review to assess the precision and efficiency of current AI-based systems in comparison to traditional methods for diagnosing, evaluating the progress of patients' treatment and monitoring stability during follow-up.<sup>15</sup> The researchers conducted a thorough investigation utilizing various online databases and identified diagnostic software and dental monitoring software as the most extensively researched programs in contemporary orthodontics. The former, specifically, demonstrates high accuracy in identifying anatomical landmarks crucial for cephalometric analysis. On the other hand, the latter empowers orthodontists to comprehensively monitor each patient, specify desired outcomes, track progress and provide early warnings regarding potential changes in pre-existing pathology. Despite these advancements, there exists limited evidence to evaluate the stability of treatment outcomes and the detection of thus contributing little to aid in patient's expectation fulfilment. In summary, the study asserts that AI serves as an effective tool for managing orthodontic treatment, spanning from diagnosis to retention, thereby benefiting both patients and clinicians. Patients appreciate the user-friendly nature of the software and perceive improved care, while clinicians can expedite diagnoses, assess compliance and promptly identify issues such as damage to braces or aligners. The review highlights the potential of AI to enhance the overall orthodontic treatment experience for both patients and clinicians involved. Surprisingly, participants did not anticipate public opposition to wearing fixed orthodontic appliances, suggesting a normalization of orthodontic treatment within the community. Remarkably, orthodontic patients held high expectations for achieving straighter teeth and an enhanced smile, with a greater emphasis on the former. This aligns with previous research by Strunga and Bauss, revealing that patients prioritize the alignment of teeth over achieving a great smile.

Interestingly, male participants exhibited higher expectations of having to wear headgear throughout orthodontic

treatment compared to their female counterparts. This finding, coupled with their anticipation of greater discomfort and dietary restrictions, suggests that male participants harbored more unfavorable expectations regarding orthodontic treatment. These nuanced insights into patient expectations contribute valuable information for orthodontic practitioners in tailoring treatment plans and addressing potential concerns.

### CONCLUSION

Patients tend to have similar expectations when it comes to orthodontic care, but males often demonstrate a higher level of realism regarding treatment duration and the initial appointment. However, there is a contrast in patient expectations compared to their parents' beliefs, particularly in terms of dietary and beverage restrictions associated with orthodontic treatment.

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### DISCLAIMER

None

### CONFLICT OF INTEREST

None to declare

### FUNDING DISCLOSURE

None to declare

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