

IDENTIFICATION OF KEY DETERMINANTS IMPACTING THE DURATION OF ORTHODONTIC TREATMENT

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ABSTRACT

Orthodontics is one of the treatment methods to align the teeth. Due to the expansion of science in the field of dentistry and the arrangement of teeth, various orthodontic methods have been created. And there is a different treatment method for each type of abnormality. Clients and patients undergoing orthodontic treatment in most cases like their orthodontic period to be short. The purpose of this retrospective study was to identify the quantify the effect of factors that influence orthodontic treatment time.

Key words: Orthodontic, Patient, Factors, Treatment.

The aim of this study: Greater understanding of the factors that influence treatment time would be useful for several reasons.

Patients want to know how long orthodontic treatment will take, and those who complete treatment on time, might be more satisfied and more likely to refer additional patients. Timely completion of treatment allows for a more accurate prediction of costs and the ability to treat more patients. From a patient's (or parent's) perspective, shorter treatment times have an impact on lifestyle, and, from an orthodontist's perspective, patients are less vulnerable to compliance "burnout." Despite its clinical importance, little is known about the factors that influence treatment time.

INTRODUCTION

There are many influential factors that can impact the course of orthodontic treatment, ranging from the patient's own biology and behavior to the treatment plan and the expertise of the orthodontist. Here's a breakdown of some key categories:

Patient-related factors:

1. Age: Age plays a crucial role in bone remodeling and tooth movement. Younger patients tend to respond faster to treatment due to their more resilient bone structure.

2. Cooperation: Adherence to treatment instructions, including wearing appliances as directed, maintaining good oral hygiene, and attending appointments regularly, is critical. Poor cooperation can significantly prolong treatment time and compromise outcomes.

3. Oral hygiene: Poor oral hygiene can lead to inflammation and infection, hindering tooth movement and potentially requiring adjustments to the treatment plan.

4. Medical conditions: Certain medical conditions, such as diabetes or autoimmune diseases, can affect bone health and healing, potentially influencing treatment duration.

5. Lifestyle habits: Smoking and excessive alcohol consumption can negatively impact bone health and gum tissues, potentially slowing down orthodontic tooth movement.

Treatment-related factors:

1. Malocclusion severity: The complexity of the initial misalignment of teeth and jaws plays a major role in treatment duration. More severe cases typically require longer treatment times.

2. Treatment plan: The chosen treatment approach, including the type of braces used, the frequency of adjustments, and the use of additional appliances like headgear or elastics, can significantly impact treatment length.

3. Extractions: Tooth extractions, sometimes necessary to create space for proper alignment, can add time to the treatment process as teeth need to shift into the newly created spaces.

4. Treatment phases: Some treatment plans involve multiple phases, such as initial alignment followed by bite correction, which can extend the overall duration.

Orthodontist-related factors:

1. Experience and expertise: An orthodontist's skill and experience can play a role in treatment efficiency and effectiveness.

2. Treatment philosophy: Some orthodontists may prioritize faster treatment, while others may favor a more cautious approach to minimize potential complications.

3. Communication and collaboration: Clear communication and collaboration between the orthodontist, patient, and any other involved healthcare providers can help ensure adherence to the treatment plan and address any issues promptly, potentially minimizing delays.

Other factors:

1. **Genetics:** Individual differences in bone density, metabolism, and response to forces can influence treatment duration.
2. **Socioeconomic background:** Access to quality dental care and financial limitations can impact treatment decisions and adherence.
3. **Psychological factors:** Patient motivation, anxiety levels, and self-esteem can all affect cooperation and overall treatment experience.

CONCLUSION

Orthodontic treatment can significantly improve a person's oral health, facial aesthetics, and overall well-being. However, its success depends on various factors that influence its duration, effectiveness, and overall patient satisfaction. By understanding these factors and engaging in effective communication, patients, orthodontists, and their families can work together to achieve optimal outcomes. Remember, orthodontic treatment is a journey, not a race. By understanding the influential factors and engaging in effective communication, patients can make informed decisions, maximize their treatment's effectiveness, and achieve a beautiful and healthy smile.

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