

REVIEW ARTICLE

**Patient Compliance in Orthodontics**

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**ABSTRACT**

Patient compliance is a critical factor in the efficacy of orthodontic treatment. Major treatment decisions hinge on the expected level of compliance and poor cooperation usually prevents the orthodontist from realizing optimal treatment results. Although the knowledge and skills of the clinician remain significant, the cooperation of patients and that of the parents, in the case of children and adolescent patients, plays a major role in achieving the desired orthodontic results. Patient cooperation is the single most important factor every orthodontist must contend with. This article deals with patient compliance in orthodontics, reasons for poor patient compliance and methods to improve patient compliance

**Key words:** therapeutic regimen, personality test, patient motivation.

**INTRODUCTION**

Compliance is "the extent to which a person's behavior coincides with medical or health advice". In orthodontic clinical practice, as well as in other dental specialties, success of treatment depends not only on factors such as an adequate diagnosis, the use of a precise and biocompatible biomechanical system, or the adequate response of the biological tissues but also on an additional variable: the patient's cooperation. If the patient does not follow the recommendations provided by the clinician (hygiene, appointments, care of the appliances, use of elastics) treatment duration may be longer, treatment outcome may be incomplete, and the final result can be unpredictable or unsatisfactory.

**Poor Compliance**

Poor compliance can result from a variety of factors

1. Patient does not know the therapeutic regimen
2. Patient unaware of the recommended regimen
3. Poor motivation of patient.
4. Patient personality.

**Patient does not know the therapeutic regimen.**

If a patient does not know the therapeutic recommendation and/ or does not have the skill or dexterity to perform the recommended behavior

then poor compliance results. Orthodontic treatment can provide many good examples. An orthodontist's recommendation for intra-oral elastic use some times changes during treatment in terms of location of elastic placement, duration of use, force of the elastic used, and number of elastics used at a time. Furthermore, patients must have sufficient training and manual dexterity to place intra-oral elastics. Orthodontists recognize these potential problems and thus often write a description of the recommended regimen on the outside of the bag containing the elastics and teach patients how to place elastics.

**Unaware of the recommended regimen**

Another obstacle to compliance is that patients are often unaware of how well they are following the recommended regimen. In orthodontics, patients are often asked the average number of hours per day that an appliance has been worn since the previous visit. This request requires patients to accurately recall, or to have kept records, of the cumulative wear time and then to divide that value by the number of days since the previous appointment. This calculation is simple if the patient has not used the appliance.

**Poor motivation of patient**

Poor motivation can also contribute to non-compliance. A patient may recognize that the regimen is not being followed and yet simply not

be motivated to correct the discrepancy. Poor motivation can also result from a lack of concern over the long-term health consequences of one's behavior and/or a lack of belief in the treatment. Cognitive approaches that emphasize the personal relevance of the regimen or address misconceptions about the treatment may enhance motivation. Several approaches may be useful in treating this cause of poor compliance. Providing incentives or rewards for compliant behavior might be a useful strategy to enhance motivation. The cause of noncompliance is multifactorial and strategies to improve compliance must be tailored to fit each situation. Current orthodontic research focuses on a critical aspect of the feedback; specifically, the input received by the comparator that quantifies the actual amount of adherent behavior. This aspect of the feedback loop is particularly problematic because when asked how many hours a headgear has been worn, patients do not know how to estimate the total. Likewise, orthodontists cannot reliably estimate the amount of wear and parents are not sure of their child's degree of appliance use. Patients, parents, and clinicians need a way to ascertain this information.

### Patient personality

Patient personality may be an important factor for patient compliance. Patient characteristics are contributing factors for predicting patient compliance and overall treatment success. Substantial evidence has accumulated suggesting that patients' personality characteristics are important for the individually attainable level of treatment compliance. Studies dealing with the psychological assessment of patients undergoing orthodontic treatment have outlined psychological profiles of uncooperative and cooperative patients. Sergl *et al*<sup>1</sup> compared extraordinarily cooperative orthodontic patients with patients rated by their clinicians as highly uncooperative. Specific psychological diagnostic tests were used for evaluation of patient's cooperation, responsibility, reliability, and endurance during treatment. The results indicated that irrespective of gender, the patients who tend to be uncooperative are inclined to attitudinal preferences conventionally regarded as masculine, which are expressed as active, aggressive, and realistic behavioral patterns and self-images, rather than sensitive, esthetic and idealistic ones. Allan and Hodgson<sup>2</sup> reported that patients more likely to show higher levels of treatment compliance are enthusiastic, outgoing, energetic, self-controlled, responsible, trusting,

diligent, and obliging persons.

### PERSONALITY TEST

Personality tests have been used by a number of investigators, generally with the goal of being able to predict patient cooperation by identifying particular personality types. Both Gabriel<sup>3</sup> and McDonald<sup>4</sup> used the California Test of Personality. This test purports to measure a number of psychosocial domains, such as self-reliance, sense of personal worth, or social skills.

Gabriel<sup>3</sup> found a low correlation between the scores from items of the California Test of Personality and a post treatment, subjective assessment of motivation. He believed this correlation was too low to be predictive. McDonald<sup>4</sup> reported a significant correlation between scores on the California Test of Personality and patient cooperation.

Southard and Tolley<sup>5</sup> examined the feasibility of using a commercially available adolescent personality test to predict the behavior of adolescent patients in an orthodontic practice. Specifically, this study tested:

1. The use of the Million Adolescent Personality Inventory (MAPI) as an appropriate instrument for an adolescent orthodontic population and
2. The correlation between MAPI test results and orthodontic compliance.

Authors concluded that the MAPI has potential as a useful instrument in assisting the management of adolescent patient behavior in an orthodontic practice. The successful practice of orthodontics is significantly dependent on the interaction between the orthodontist and patient. Therefore, it is important to improve this relationship for superior treatment outcomes, patient satisfaction, and doctor satisfaction. In the busy orthodontic practice, it is often difficult to establish a close rapport with the patient. Better doctor/ patient communication can result in increased and more accurate transfer of information, thus improving the quality of care. The patient's perception that the orthodontist paid attention and took seriously what the patient had to say is significantly related to superior doctor/patient relationships. Making the patient feel welcome is also a significant factor in establishing this rapport.

### Various prevention and improvement concepts that can positively affect orthodontic patient compliance are<sup>6</sup>:

A shift from a practitioner-centered model of patient care to a patient-centered approach is

emphasized. It includes:

1. Patient-centered care versus practitioner centered care,
2. Patient's causal attributions,
3. Patient support at home and at the orthodontic office,
4. Rewarding compliant behaviour and
5. Orthodontist-patient interaction

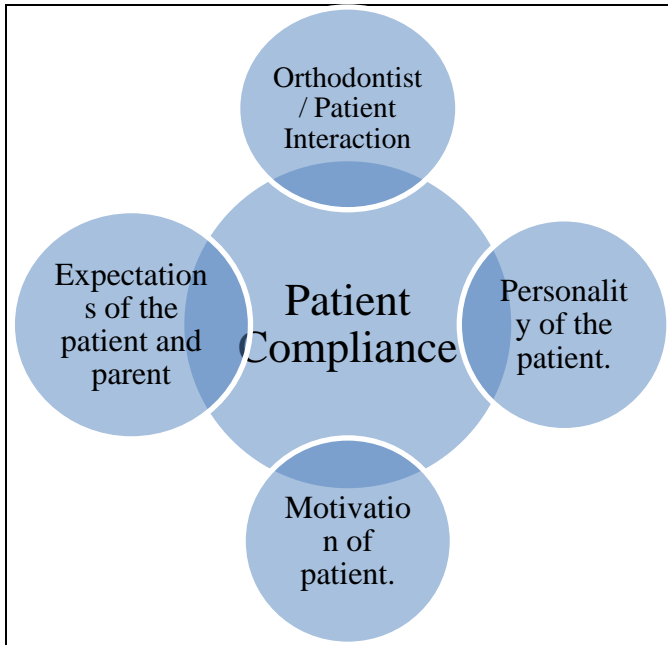


Fig1- Factors affecting patient compliance.

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## CONCLUSION

Patients and parents place trust in orthodontist when they seek treatment. They rely on you to tell them if the treatment is essential. All your patients will not finish treatment successfully. This is always not your fault. Lack of patient cooperation and vagaries of growth sometimes mitigate success. It is an alert orthodontist who recognizes the emotional reactions of the patient and not only treating malocclusion but also psychological fears, frustrations and behavior. The principle of knowing as much as possible about the patient, his family and his environment is a must that all practitioners should keep in mind, for dentistry, like medicine; recognize the therapy is not really successful unless the whole patient is treated.

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