

Understanding Patient Compliance During Orthodontic Treatment

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Abstract

The practice of orthodontics has sometimes been described as involving two distinct but related processes, the physiological-mechanical and the psychological-educational. Proper application of appliances to the physiological-mechanical is essential to successful treatment, but no amount of attention by the orthodontist to sophisticated techniques is likely to have much effect, if those efforts are met with resistance or indifference on the part of the patient. But how does one counter that indifference or overcome that resistance? How does one even understand it? This is a most serious and baffling problem, because it is very difficult for those in the health professions to distinguish which patients will be compliant and which will not, and to know what to do about it.

Keywords: *Patient Compliance, Orthodontic Treatment, Behavioral Pattern.*

Introduction

For centuries, medical practitioners have been concerned with unsuccessful outcomes of treatment. Physicians have sometimes rationalized their failures as resulting from an incurable illness, ineffective medication, or divine interference. Some research conducted in the past twenty years suggests that unsuccessful outcomes are not so much a function of patient biology, drug potency, or heavenly interference as they are a matter of noncompliance. The medication may not have been taken in the prescribed way, or may not have been taken at all¹.

Some orthodontists believe that their specialty and its attendant problems are so unique, that what applies

to physicians does not apply to them. No doubt, some aspects of the practice of orthodontics are unique. However, orthodontists have their share of noncompliant patients, who affect both the quality of care and cost-effectiveness. A noncompliant patient is less likely to achieve quality results, and more likely to become a “special case”, requiring more time, effort, and staff attention than more compliant patients. This time and energy loss might indeed be charged for, but this usually penalizes the parent, not the uncompliant patient. There is very little reason to believe that charging additional fees brings about a cooperative attitude in an adolescent patient, who does not pay them. Moreover, charging additional fees shifts the emphasis to the payer of the penalty and away from the noncompliant patient.

Compliant/Noncompliant Research: It makes sense for the orthodontic specialty to pay attention to what general medicine has learned about noncompliance, by reviewing the relevant literature. Most of the research has consisted of comparisons of compliant and noncompliant patient groups drawn from communication studies and general medicine. However, the psychological principles involved apply generally throughout health care delivery. From such research factors that are not believed to influence compliance are:

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1. The severity of the illness.
2. Patients' demographic characteristics, although there may be some sex differences.
3. Patients' knowledge about the illness and an understanding of how to follow the regimen, which are necessary for compliance, but not sufficient by themselves to guarantee it².

Factors which are believed to influence compliance are:

1. Some psychological characteristics of the patient (although these tend to be complicated and confounding).
2. Beliefs that patients have about their illness and treatment.
3. Some features of the interaction process between doctor and patient.^{1,2}
4. Some features of the treatment regimen.

A summary of the research on compliance, based on hundreds of investigations, is provided on the accompanying chart.

Psychological Characteristics: Compliance is not a simple matter of “kinds of people”—those who will comply and those who will not. Compliance is behavior, just as noncompliance is. Since behavior is observable, one can know eventually who the compliers and noncompliers are; but, other than in behavior, how do compliers and noncompliers differ from one another? Do they have traits or characteristics or personalities, which would distinguish them from one another? Even though the behavior may appear to be a simple matter of cooperating or resisting, the human motives behind the behaviors may be highly complex and confusing. Nevertheless, there are a few guidelines for understanding the person behind the behavior. These have been called general response tendencies.

Yeasaying/Naysaying: The first of the general response tendencies has been termed “overall agreement” or the “yeasaying-naysaying tendency”³ It describes people who have a typically favorable or typically unfavorable response to whatever they encounter. Some people, as a matter of personality, would be agreeable to a treatment regimen and accept it, while others are predisposed to be negative and resist it. In either case, the response has nothing to do with what the doctor says or does. These people are prone to respond to most

situations that way.

The yeasayer's general attitude is described as stimulus acceptance. He is ready to respond affirmatively, impulsively, and quickly. He is attracted by enthusiastic presentations, while naysayers are repelled by the same thing. Naysayers are extremely careful and critical, trusting objective data, rather than feelings or impulses. Alert clinicians may be able to distinguish between yeasayers and naysayers, and treat them differently.

Persuasibility: The second guideline for understanding the person behind the behavior is called “general persuasibility” Women were found to be more susceptible to persuasion than men. During childhood, girls tend to be more obedient to commands and directions from adults, but this diminishes with maturity. As children, they are more easily influenced by young boys than by young girls, but they are not as easily influenced by adults, once they reach puberty. Young boys are especially concerned with maintaining their status in their peer group, and are probably more vulnerable to peer group pressure than girls.

It is important to remember that, although there are average numbers, there are no average people. Even though women may be generally more persuasible than men, it is difficult to predict just which women they will be; whereas men do tend to respond more consistently to persuasive messages. Janis⁶ has hypothesized the following characteristics associated with persuasibility, but applying more to men than to women:

1. Individuals who are hostile toward the people they encounter in daily life are predisposed to remain uninfluenced by any form of persuasion⁴.
2. People who are socially withdrawn are relatively uninfluenced by any form of persuasion.
3. People with rich fantasy lives — with strong responses to rich imagery and words and pictures — tend to be more persuasible than those whose fantasy responses are more constricted.
4. People with low self-esteem— as manifested in feelings of personal inadequacy, social inhibition, and depressive affect— are predisposed to be more readily influenced than people with high self-esteem.
5. People with an “other-directed” orientation are predisposed to be more persuasible than those with an “inner-directed” orientation. It seems reasonable that a person who relies more on his own opinions

than those of others would be less influenced by the opinion of others. While those with basic feelings of insecurity and those who rely on external authority may be more easily influenced by persuasive messages and more willing to comply, this is not the case with dogmatic individuals. For them, the messages which oppose their beliefs are more likely to be rejected. Dogmatic persons dismiss evidence and logic with which they disagree. They may be influenced in their peripheral or inconsequential beliefs, but will resist information which they cannot incorporate into their existing central beliefs. There is some evidence that levels of dogmatism can be changed⁵.

There are some psychological characteristics which help to determine compliance-noncompliance. Among these are agreeing tendencies, general persuasibility, the sex of the patient, dogmatism and centrality of the belief in question. Even though they have been insufficiently researched, these appear to be potentially crucial concepts for understanding what is involved when a patient cooperates or does not cooperate with a treatment regimen⁶.

Patient Beliefs: While the seriousness of the illness has very little to do with patient compliance, what a person understands and believes about the illness and the treatment might. For example, a person who believes that the treatment extends over “too long” a period, or a person who believes that the treatment is “too complicated” will typically not comply with treatment. The combination of the “too long” and “too complicated” beliefs almost ensures noncompliance. “Too long” and “too complicated” are subjective and relative. Too long or too complicated compared to what? They are a “judgment call” based on belief, rather than something as factual as the severity of the illness or the difficulty of the procedures involved in treatment.

Patient beliefs about the illness and treatment and doctor-patient interaction seem to be tied together, although not completely. Some of the beliefs may come from the doctor, but a good many may not. Some may be no more than myths or “old wives’ tales” Recent studies on the “Health Belief Model” conclude by recommending that the health worker systematically explore the patient’s beliefs related to illness and treatment. Examples related to orthodontics might include:

“Is there anything that worries you about getting orthodontic treatment?”

“Can you think of any problems you might have in wearing headgear?”

“Have you known anyone else who has had orthodontic treatment?”

“Did they have any problems with it?”

“How did things turn out for that person?”

The “Health Belief Model” suggests that patients’ beliefs can change from visit to visit, and that these types of questions should be asked at each visit to monitor those changes. However, in terms of cost and efficiency, this is a very expensive approach to improving patient compliance. There is good reason to believe that the “beliefs factor” is closely related to the “doctor-patient interaction factor”, and that it is not the Health Beliefs Questionnaire which facilitates compliance, although it fosters a better understanding. It is rather the fact that the health worker must spend a considerable amount of time with each patient, asking questions and demonstrating a sincere interest in the patient, which increases his compliance⁷.

Doctor/Patient Interaction: In an attempt to create a questionnaire to predict which orthodontic patients would comply and which would not, the authors put together a variety of items related to self-concept, attitudes toward dental hygiene, attitudes toward authority, and the interaction between the doctor and the patient. Using what is known as the method of “known groups”, the questionnaires were given to hundreds of patients who were identifiable as extremely compliant or noncompliant in orthodontic offices in Texas, Kansas, and Colorado. Since the groups were selected as the extremes of compliance, it was felt that they might answer some of the questions differently, and that those items might be the best predictors of compliant-noncompliant behavior. The only items that produced opposite responses between the two groups were:

“My orthodontist praises me when I do well.”

“My orthodontist cares about my feelings.”

“My orthodontist is fair in judging my progress.”

These items are not so much about the patient or even about the orthodontist as they are about the relationship between the patient and the orthodontist. Interaction influences that relationship, which in turn influences compliance. Several factors have been found

to interfere with doctor/patient interaction and, thus, reduce compliance. These factors include:

1. The doctor seeking information from the patient without providing the reasons why the information is being gathered, as if the information were only important for the doctor.
2. Tension emerging during the interaction, which is not addressed or resolved.
3. Patients feeling that their expectations are not being met, or feeling that the doctor is treating them impersonally.

It would appear that, if a health worker intentionally set about establishing such a relationship with patients, compliance would significantly increase. Carolyn Hudak-Murphy tried that at the University of Denver with arthritic patients and found it didn't work. Perhaps it was because the patients suspected that they were being manipulated and that the relationship was not as genuine as it was presented to be. Another explanation is that compliance may flourish in an authoritarian environment. It suggests that one person knows what is best for another, and that the other person should accept that. There is the possibility that equality in a relationship interferes with that authoritarian format and interferes with compliance. It suggests that, while the doctor can encourage compliance by being personal and authentic, he may very well defeat his compliance aim by being too friendly and making the patient a peer⁸.

Rachelle Kaye, at the University of Denver, was interested in finding out what mode of communication was most successful in securing compliance from a doctor who was not living up to the hospital standards of quality of care. What Kaye discovered was that it was not oral versus written communication or individual versus group communication that made the difference in achieving change. It was pointing out to the physician that there was a discrepancy between the standard previously agreed upon and his failure to maintain that standard⁹.

If these findings might apply to noncompliant orthodontic patients, an orthodontist would avoid a personal attack on the patient, and concentrate instead on calling attention to the fact that the patient had earlier agreed to a certain treatment regimen, but was now falling short of what he had agreed to. Some health practitioners have found it useful to tape-record the interviews at which the regimen was agreed to, and play them back

to the patient. They are like an oral contract that can be reviewed, when necessary. They place the responsibility exactly where it should be— on the shoulders of the person who is not living up to the agreement.

The question of compliance/noncompliance is involved in virtually every case a doctor treats. At the same time, it is a baffling problem, not easy to understand because the causes are complex, and not easy to deal with because what works with one patient may not work with another. In some instances, the noncompliance may be a feature of the psychological makeup of the patient, and the beliefs that the patient has about the condition and treatment, and can in a way be “blamed” on the patient. Although the doctor may not have much effect on the psychological characteristics of the patient, he might take those into account in attempting to influence the beliefs of the patient to secure compliance¹⁰.

It is also important for the doctor to know that the actual treatment regimen influences compliance and that a doctor who reduces negative aspects and optimizes positive aspects of the treatment regimen will increase his or her chances of treating cooperative patients. Some features of the treatment regimen, such as length of treatment, maybe “givens” and, as such, are unavoidable conditions of the treatment. Others can be altered in a positive way.

Enhancing patient compliance: It is not uncommon that there needs to be any learning of psychology in the field of orthodontics, yet, in the approach to the patient there will always exist an element of psychology that will enhance the progression of treatment.

Usually, patients do not co-operate in treatment in one/more of the following ways:

- Frequent absence from scheduled appointments
- Frequent damage to orthodontic appliances
- Unpleasant or negative office behavior
- Failure to attend to proper hygiene
- Failure to wear headgear and/or elastics
- Failure to wear retaining devices

The question to ask here is **Why do they exhibit such a behavioral pattern?** To this there may be several reasons.

Firstly, if we were to analyze the age at which most

kids approach for treatment they would fall in pre-pubescence or early adolescence. Classically these are the ages when repressed expressions exist between the parent and child. The struggle is between the child's ownership of his/her body and the parents' demands that the child does as he is told. Taken in this perspective, the parent might be saying "we will fix your body the way we like it." The child in turn may be revolting in a passive-aggressive way by saying "it is my body and I shall resist any efforts you might make to change it.

Secondly, every human being reacts in different ways to pain. The mouth per se is an organ for the ingestion of food, a means for the expression of thoughts and feelings and an orifice of erogenous significance. For kids intrusion by means of placing foreign objects may not produce dramatic pain but they tend to place things in a figure of overestimation thereby introducing psychological factor⁶.

Thirdly, appliances in the mouth in addition to improving smile and appearance do invite ridicule by others in one way or the other. Whether the response is positive or negative is to be perceived by the individual who is undergoing the treatment. For instance, individuals with braces may be greeted with remarks such as 'tinsel teeth', 'metal mouth', 'tracky smile' and so on. These remarks may end up in a response that ranges from complete withdrawal to a blow in the mouth. However, there is the other section of individuals who perceive wearing braces as a badge of pride. These individuals look upon themselves as being different from others and flashing their braces earns them the reputation of being a subculture of an 'elite' background¹¹.

But still there does exist that small group for who before any orthodontic appliance had been applied were considered as unacceptable or unwilling among their peers. When they decide to finally go ahead with the treatment the appearance of the braces draws remarks of jeer. They thus become fearful of it and withdraw from any situation that singles them out. So they tend to miss appointments and not co-operate in the hope that the inattentiveness will ward away^{12, 13}

Conclusion

Fourthly, there is a belief that by orthodontic treatment the result should be more esthetically pleasing. It is intended to make one more attractive, pleasant and socially more pleasing. This is generally the idea with which most people opt for treatment. Yet there are

many whose self-image is essentially negative. They could not be made attractive because they do not feel so from the very start. It is better for such people that they do not invest in orthodontic treatment. They do not want to be more attractive because they feel themselves unattractive. What these youngsters are saying is that any external cosmetic appearance will not make me look better and is an unwelcome assault on my self-assumption which is not only negative but over the years have become so.

The way out with such patients would be to:

1. Conceptualize, describe and define the various attitudes towards orthodontics in young patients.
2. Develop instruments, which will help to assess the attitude of the patient.
3. Once the patient has been identified, the next plan is to develop plans and processes to modify or counteract the results of a negative attitude pattern.

It would appear that the Orthodontist is placed in direct conflict with the unrestrained and/or indifferent adolescent. It would seem advantageous to develop programs like the **Orthodontic Attitudinal Test Survey (OATS)** which is a questionnaire designed to tap patient attitudes about appearance, authority and invasion, comprehend the attitude of the individual and address the patient's needs and deal specifically with hidden feelings that can often become a hindrance in patient compliance. Booklets, programs and personal relationships based on this approach actually serve to control the battles that are likely to exist between the orthodontist and the patient.

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