The term “psychosomatic norm” is not commonly used directly or indirectly in orthodontic discussions. However, at times, this may be the most important factor affecting patient satisfaction with treatment outcome. Psychosomatic norm is a norm based on a subjective psychosocial assessment of what is the patient’s norm. A norm that significantly differs from the clinician’s somatic norm, which is based on objective anatomic assessment, may end in a dilemma of unexplainable and unpredictable dissatisfaction with the orthodontic treatment outcome if not properly handled by the orthodontist. This review article attempts to approach and solve this clinically problematic situation. World J Orthod 2006;7:394–398.

Research suggests that patients usually seek orthodontic treatment for improvement of esthetics and that the principal benefits patients perceive post-treatment are related to esthetics.1 “Psychological aspects have also been cited as justification for treatment, but patient perceptions of their malocclusion are frequently disproportionate to the objective signs of the malocclusion,” wrote Daniels and Richmond2 in 2000.

In the orthodontic specialty, it is not uncommon to be confronted with patients who have undergone appropriate orthodontic treatment, but who return with vague complaints regarding treatment outcome. While clinicians can often produce sound explanations for the achieved treatment outcome, based on their understanding of the somatic norm, the patient requests further explanations. Typically, orthodontic treatment is provided to the standard of the clinician’s anatomic point of view, but this standard may not deliver patient satisfaction. The orthodontist may consider patient dissatisfaction unpredictable, unexpected, and even unacceptable. This dilemma of misunderstanding and divergent thinking between the 2 sides causes further distress. Clinicians need to understand that they are not dealing only with the patient, but through the patient to those affecting his or her sense of facial norm and beauty.

To solve this clinically problematic situation, the orthodontist has to understand both conscious and unconscious patient motivation. In orthodontics, most clinicians approach patients objectively; in the approach to any problem, the clinician works to achieve the anatomic average norm—but this is not always the solution the patient desires. Patients look subjectively, according to their perception; satisfaction with treatment outcome can be completely different from that of the orthodontist. It is difficult, if
not impossible, to predict patient satisfaction with treatment outcome without adequate understanding of patient motivation. To bridge this gap, the clinician can interpret and attempt to understand the psychosomatic norm of the patient. A norm may be vague to the patient, but it is gained and established unconsciously and continuously during development. To make is somewhat easier, the clinician should know that patients are the mirror image of their society; this will be the key to understanding motivation and to arriving on common ground. While other justifications for orthodontic treatment of dental malocclusions exist, patient psychosomatic sense of norm must be seriously considered prior to and during treatment.

Holdaway stated, “Better treatment goals can be set if we quantify the soft-tissue features which contribute to or detract from that ‘physical attractiveness stereotype’ which has been ingrained into our culture... Steiner has stated that there are hundreds of measurements that one can use in the tracing of a head film; however, we must not let the number of things that we measure become so complicated and unwieldy that it ceases to be practical.” This puts a heavy burden on clinicians to interpret and extract what is behind the solid measurements of treatment results. The clinician’s experience plays a critical role; for example, the esthetics of the smile is clearly of significant clinical importance to patients, and could be the most important criterion by which they judge treatment satisfaction.

SUBJECTIVE SELF-IMAGE OF NORMALITY

In the author’s office, the term “patient side” is used to include not only a patient, but family and others who could directly or indirectly affect that patient’s unconscious sense of beauty and attractiveness. There is often a divergence between the expectations of the patient side before and after treatment and those expectations and judgments of the orthodontist. This divergence can be explained by the fact that most clinicians limit the clinical examination of their patients to the malocclusion; if patients’ faces are examined, they are examined in a static position, which neglects the range of facial expression. For example, if only lips are considered during different expressive actions, the clinician will face a dilemma. The stress on the lips is derived from the fact that they form, with the teeth, the basic foundation of the smile. Ignoring this fact will not lead to patient satisfaction with treatment outcome.

Orthodontists are asked to manage not only the functional abnormalities of dental malocclusion, but to respect and respond to the esthetic motivation of the patient. In this respect, the solid numerical value of different diagnostic measurements in the orthodontic records is not sufficient as the sole deciding factor for successful orthodontic treatment. Czarnecki et al concluded that there are many other more subjective variables that are as important in influencing the treatment plan, including the clinician’s professional training, experience, treatment philosophy, and personal bias of what constitutes a balanced or pleasing profile. Some of these variables are subjective and qualitative in nature; others are more objective and possibly quantifiable. According to Czarnecki et al: “Evaluation of facial esthetics is at best subjective, because balance and harmony of facial components do not necessarily mean an attractive face.” This subjective self-image of what is normal for facial balance, harmony, and, subsequently, an attractive face, is expressed in the psychosomatic norm.

PSYCHOSOMATIC NORM

The term “psychosomatic” indicates a condition that is mental, not physical, in origin. While this term is not commonly used in orthodontics, it is used in orthognathic surgery to give explanation of the lack of patient satisfaction with treatment outcome. The psychosomatic facial norm pattern is a complex term, multifactorial in nature, with racial, socioeconomic, and educational factors playing roles in its development. The sense of
Psychosomatic facial norm can differ between races, and within a race, between different generations, and by socioeconomic and educational level. Psychologists say that perception depends on the development of “form concepts”—the more frequently a particular facial pattern is observed, the more likely it will be perceived as “correct.”

However, perception of facial harmony, balance, beauty, and attractiveness is both unconscious and unfixed.

To apply this concept to the orthodontic practice, with the patient and clinician belonging to the same race, the clinician is likely to belong to an older age group, as well to a higher educational level, than the patient. Therefore, it makes sense that the orthodontist and patient will have somewhat different perceptions of normal facial pattern and beauty. In addition, the patient side may be seeking orthodontic treatment for reasons other than that of their child’s malocclusion, and the child’s motivations will likely be only the reflection of his or her parents’ concerns.

**FORM CONCEPTS AND PERCEPTION**

The development of “form concepts,” as stated by Adcock and Bartley, is the foundation of an individual’s perception of forms. The day-to-day development of facial norm concepts becomes the foundation of an individual’s perception of facial norms. The facial norm concept develops unconsciously from birth. The mother’s face is typically the first face in a baby’s facial norm concept. Social relationships with the surrounding environment, starting with family members, relatives, friends, and finally the larger community, continuously and unconsciously add to the development of this facial norm concept and perception of norm.

**SOCIETAL CONCEPT OF NORM**

The societal concept of facial norm is a complex subject. For example, the characteristic facial pattern of black Africans, with its convex facial profile, skeletal-dental bimaxillary protrusion, gummy smile with full lips, and somewhat larger teeth, forms the facial norm concept of black Africans and influences their perception of facial norm and beauty. The same idea can be applied to the Caucasian population. Consequently, neither would be satisfied by the other’s concept of facial norm and beauty. An interesting study by Martin provides some explanation; the study was undertaken on 3 groups, each composed of 50 individuals. The first group was American whites, the second group was American blacks, and the third group was African (Nigerian) blacks. The results showed that the American white and American black groups shared a common esthetic standard that favored the Caucasian facial norm, at least for the female face. On the other hand, the African black group considered the Caucasian facial features less attractive than did the 2 American groups. This may be explained by the fact that the American blacks were raised in a society under the influence of the American white mass media. Subsequently, the development of both black and white Americans’ concept of facial norm is the extract of the surrounding concept—what can be called the “societal concept of facial norm.”

**MASS MEDIA, GLOBALIZATION, AND DEVELOPMENT OF NORM CONCEPT AND PERCEPTION**

Theoretically, within a given society, there is more or less the same perception of facial norm and beauty. This perception is developed unconsciously from the environment in which its members are raised. Mass media has a significant influence on the development of perception. Today, globalization, satellite communication, and the Internet have spread mass media, and a single perception of facial beauty may now be shared among different societies, nationalities, and races. One day, this may result in the globalization of the psychosomatic norm and the perception of facial beauty and attractiveness.
SOCIOEDUCATIONAL LEVEL, NORM CONCEPT, AND PERCEPTION

Socioeducational level has been noted as a factor that can significantly affect norm perception and patient priorities for orthodontic intervention. Linn\textsuperscript{9} concluded that poorly educated people are concerned with correcting their child’s dental irregularities, irrespective of their child’s “accompanying psychological sensitivity.” This psychological component of motivation has been found to be given equal value by more highly educated parents.\textsuperscript{9}

Kohn\textsuperscript{10} studied the influence of social level and found that the “working-class parents” want their child’s teeth to be adjusted to the standard norm, while the “middle-class parents” are more concerned about their child’s feelings. However, the findings of Linn and Kohn cannot be taken for granted; poorly educated or working-class parents may not have the ability to express their motivation for the orthodontic treatment with the same eloquence of the highly educated or middle class parents.

Peck and Peck\textsuperscript{4} concluded that “people do share a common basis for esthetic judgment regardless of nationality, age, sex, or occupation.” This statement, when considered carefully, reveals that when individuals belong to the same nationality and approximately the same social and educational level, age and gender must be considered the dominant factors influencing esthetic judgment. The basis of esthetic judgment, regarding facial beauty and attractiveness, for example, significantly differs between genders. With age, this basis may change within the same individual.

THE ORTHODONTIST IN THE MIDDLE OF THE ROAD

What about the orthodontist? Peck and Peck\textsuperscript{4} stated that “the orthodontist is subject to cultural biases and reinforcements like everyone else. However, his interest in facial esthetics is more academic than emotional. Therefore, he must have and does have at his disposal many objective methods for evaluating the face.” However, orthodontists may be unconsciously treating patients to their own standard of facial norm and beauty.

Hagler et al\textsuperscript{11} quoted the following statement from Elisha Richardson, which first appeared in the book Black Dentistry in the 21st Century\textsuperscript{12}: “I look at many of the show people and I can tell which Black people were treated by white orthodontists and which ones were treated by Black orthodontists. You look at the rabbit effect when they’re treated by white orthodontists, because they treat within a Black face [to] the standard of the white.”

In view of this, the orthodontist attempts to handle the subject of facial esthetics in a more academic and more objective manner. Although patients may not clearly express their motivations for treatment, their unconscious, hidden motivations can indirectly be the primary standard for acceptance and satisfaction with treatment outcome. In most orthodontic practices, the clinician is seldom asked by patients or their families to express this esthetic concept; the patients and their families seem to be satisfied with dental malocclusion as the sole justification for orthodontic treatment. However, this is rarely the case.

The orthodontist is frequently faced by patients and their families expressing their hidden motivations only at the end of treatment. For the clinician, this appears illogical, in view of the fact that orthodontic treatment of dental malocclusion is a long procedure, undertaken on scheduled visits that could extend for about 24 months. Who should be blamed in such a complex situation? It can be safely concluded that the blame belongs with the orthodontist. There must be time at each scheduled visit to discuss the progress of the orthodontic treatment and its impact on facial esthetics. The possible esthetic impact of the treatment must be clear from the beginning and discussed during treatment planning. In addition, the subject must be raised at every visit. It is recommended that orthodontists learn to better communicate their own perceptions of facial norm and to interpret patient and parent perception of facial harmony in view of an acceptable dental occlusion.
CONCLUSION

Psychosomatic norm is an individual’s perception of norm, a norm that is multifactorial in nature, developed unconsciously, and seated in the subconscious. It differs from the anatomic (somatic) norm, which is based on the objective assessment of what is norm. The conflict that may occur between the orthodontist and the patient regarding satisfaction with treatment outcome is often a reflection of 2 different perceptions of the norm. The orthodontist bases success on the objective assessment of the treatment outcome, and to what extent the average anatomic norm was achieved. However, the patient may base satisfaction with treatment outcome on the subjective perception of norm. To solve this serious conflict in the orthodontic practice, the clinician must understand and respect patient psychosomatic norms to achieve patient satisfaction with treatment outcome.

REFERENCES