

Perceptions of patients' smiles

A comparison of patients' and dentists' opinions

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Dental appearance has been shown to influence other people's judgment of a person's facial attractiveness as well as of personal characteristics.^{1,2} The media portrayal of the perfect smile seems to lead to an increased demand for esthetic treatment from the public.³ However, little is known about patients' perceptions of the ideal smile and how these perceptions relate to their own smiles.

The smile is determined by the position, shape, size and shade of the teeth; the position, texture, color and lines of the gingiva and lips; and the shape of the jaws. Ackerman and colleagues⁴ described a morphometric analysis of the smile.

It is known that laypeople favor smiles that feature teeth with a light shade, a large display of teeth and radiating symmetry.⁵ Attempts to quantify facial beauty date back to the ancient Greeks, and a number of methods of assessing facial beauty exist. Ahmad⁶ discussed three of these methods in relation to assessing the dentofacial aspect.

— The geometric method of facial assessment is based on objective mathematical principles, using the midline, profile angles and horizontal lines (hair, ophric, interpupillary, interalar and commissural).

— Morphopsychology⁷ attempts to link the facial types with the psy-

ABSTRACT



Background. Little information has been published regarding the difference between how patients perceive their own smiles and how dentists view them.

Methodology. The authors interviewed 78 consecutively seen patients in a general dental practice in Norway about esthetic features of their faces. The patients were not actively seeking esthetic treatment. Patients rated themselves using a 100-point visual analog scale (VAS), and then two dentists (the patients' regular dentist and an independent periodontist), working with photographs of the patients, used the same VAS in rating the patients' smiles.

Results. The average age of the patients was 51.2 years (range, 22-84 years). There were 50 women (average age, 51.5 years; range, 22-84 years) and 28 men (average age, 52 years; range, 30-78 years). Patients' satisfaction with their own smiles reached an average of 59.1 (standard deviation [SD], 21.1; range, 5-100) on the VAS. The dentists' scores (38.6 and 40.7) were significantly lower than the patients' scores. The authors observed poor correlation between the periodontist's scores of dentogingival features and the patients' scores. Patients were most satisfied with the gingiva when smiling and least satisfied with tooth shade. Patients younger than 50 years were most satisfied with their smiles. Patients rated teeth and eyes as the most important features in an attractive face. Women gave teeth and hair significantly higher scores and head shape lower scores than did men.

Conclusion. Patients' opinions of their own smiles were significantly higher than the two clinicians' assessments of their smiles. Dentists should be aware that patients who seek esthetic services may have different perceptions of their smiles than may patients who do not express such desires.

Key Words. Patient perception; dental esthetics; smile; visual analog scale; dentogingival features.

JADA 2007;138(12):1544-53.

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chological make-up. The identification of four different categories of facial typology plays an important part in this facial assessment. The four categories are lymphatic (rounded full features with a timid personality), nervous (large forehead, thin delicate features with an anxious disposition), sanguine (prominent, thick, well-defined features associated with intransigence and spontaneity) and bilious (rectangular and muscular features coupled with a dominant personality).

■ Physiognomy⁸ is the art of judging a person's character or personality by the appearance of his or her face. The relevance, meaning and importance of the different facial features vary among various cultures. Although this method seems primitive, it probably still is the most common method of social assessment.

Because of the importance of facial characteristics in human society, most dentists feel that producing esthetically pleasing work is the most desirable, rewarding and interesting aspect of dentistry.⁹ It is likely that dentists have an important influence on the decisions and choices patients make when undergoing esthetic treatment. However, it has been shown that patients' decisions to seek orthognathic surgery are correlated more with a layperson's rating of attractiveness than with a professional's rating.¹⁰ It also is known that in orthodontic treatment, there is a difference between the perceived need and the normative need for treatment among the patient, the parent and the clinician.¹¹ A difference also exists in the perception of desirable tooth color held by dentists, parents and children.¹²

Several studies have compared smile assessments between laypeople and dentists.¹³⁻¹⁷ The investigators in these studies used photographs—often with software-imaging programs—to assess the importance of the shape, symmetry and proportions of maxillary central incisors; the presence and shape of the interdental papilla; the presence of a midline diastema; the gingiva-to-lip relationship; and the impact of the buccal corridor.¹³⁻¹⁷ The studies showed that dentists are far more critical in their esthetic perceptions than are patients or laypeople in general.

Age, sex and level of education are known to influence a person's satisfaction with his or her oral appearance.^{18,19} Aside from the classic first study by Dr. Ronald Goldstein published in 1969,²⁰ little information exists about how dental patients who are not necessarily seeking esthetic

treatment perceive their own smiles.

The aims of our study were to assess how patients perceive their own smiles, how these perceptions relate to dentists' assessments of their smiles and how patients perceive various facial features.

SUBJECTS, MATERIALS AND METHODS

Subjects. We included in this study all patients treated by the principal clinician (J.J.) in the month of September 2004. The patients provided informed consent, and the study was carried out in accordance with the Helsinki Declaration of 1975, as revised in 2000.

All of the patients were adults, mainly northern Europeans, visiting a private dental practice in a small rural community in Norway (population approximately 12,000). The practice is one of three dental practices in the town, which also has a community dental clinic.

The study was part of an internal quality control measure of the treatment provided by the practice.

We asked the patients if they would complete a questionnaire regarding esthetics in dentistry. Patients agreed to write their age and sex, but not their names, on the form.

Methods. *Visual analog scale.* The visual analog scale (VAS) is a measurement tool that can be applied to evaluate patients' perceptions.²¹ The VAS has been shown to be simple to administer, reliable and valid; for example, it has been used to assess discomfort associated with periodontal therapy.^{22,23} Furthermore, Fardal and colleagues²⁴ showed that the VAS can be used to identify and quantify how important various aspects of periodontal treatment are to patients. It also has been used to assess patients' satisfaction with the transplantation of premolars in connection with orthodontic therapy.²⁵ In addition, Wolfart and colleagues²⁶ used the VAS to assess dental appearances after changes in incisor proportions.

Our questionnaire consisted of two sections relating to facial esthetics using a VAS. The questionnaire's first section asked patients to rate their own smiles overall; the shape of their lips; the shade, shape and alignment of their teeth; and the appearance of their gingiva. We used a horizontal VAS bar 100 millimeters in length, with the left anchor labeled "not pleased" and the

ABBREVIATION KEY. VAS: Visual analog scale.

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