

## Facial pattern and typology influencing smile aesthetic pleasantness.

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Physical attractiveness is essential for social interaction, and the face is one of the main characteristics in our culture.<sup>1</sup> Facial pleasantness has an influence on the success of romantic affective relationships, as well as on getting a job, social life, and personality assessment. Children and adults with pleasant faces are seen as more positive than people with unpleasant faces, and this is true for both men and women.<sup>2</sup>

Every day, people judge what is harmonious or unbalanced on a face, directing more attention to the mouth and the eyes, because these represent the communication center of the face. The smile is one of the most important facial expressions and it is essential to express humor, pleasure, joy, and acknowledgment.<sup>2,3</sup> The aesthetic assessment of face and smile is subjective, difficult to measure, individual, and influenced by personal experiences and the social environment; it may or may not follow established patterns.<sup>1</sup> The visual digital media of entertainment is an example, for increasingly exposing symmetrical faces and smiles. This favors an increased demand for surgical aesthetic procedures and for aesthetic Dentistry.<sup>4</sup>

Smile aesthetics has been considered a primary concern for patients and health professionals,<sup>5</sup> and it has been extensively studied in the field of Orthodontics, for presenting a great influence on treatment plan design. Facial attractiveness depends on several details such as length and width of incisor crowns, height of gingival contour between maxillary anterior teeth, maxillary and mandibular dental midline relative to the face, gingival display of maxillary anterior teeth, buccal corridor, smile arch, overbite, and torque of canines and posterior teeth.<sup>4,6</sup>

The literature diverges on smile aesthetic perception between laypersons and health professionals. The trained eye and scientific knowledge of health professionals allow a more critical perception; hence, their opinions on smile aesthetic assessment may not coincide with that of untrained laypersons.<sup>4,6</sup> Considering this literature-established truth, would the health professional not be reckless to realize smile irregularities that were not noticed by the patient? Especially in cases where the search for aesthetic was not the primary reason for seeking treatment. It is important to highlight that after realizing these unperceived irregularities, not correcting them could let down the expectations imposed by the patient.<sup>7</sup> The decision that leads the patient to seek aesthetic procedures is not determined by criteria and objectives imposed by health professionals, rather by own experiences and the influence of other laypersons within the same social circle.<sup>7</sup>

There are few studies assessing the characteristics of smiles showing the entire face, as the great majority only shows the lower third of the face.

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Every day, society judges our patients as a whole and not just by a smile overview.<sup>5</sup> Studies<sup>1,5</sup> affirm that laypersons assess smile irregularities differently when assessing images showing only the lower portion of the face in comparison to images of the entire face. Laypersons show to be more conscious and critical when judging images showing only the smile. Other facial structures are primarily assessed before the smile,<sup>5</sup> therefore, facial appearance may minimize smile irregularities when the face is pleasant or highlight smile details when the face is disharmonious.<sup>1</sup> This becomes quite clear in the study by Zangue *et al.*<sup>8</sup> which ascertain that irregularities simulated in the smile were judged differently in patients with distinct facial patterns. Ackerman<sup>9</sup> also described that facial typology is determinant in smile aesthetics. Therefore, the acceptable limits of smile aesthetics may be even higher for laypersons when assessing the entire face.<sup>1</sup> Considering that the ideal smile may not always be obtained, there is great clinical significance in learning the flexibility of smile aesthetic perception of laypersons relative to the acceptable limits of the smile.<sup>5</sup>

Recent research tend to design methods directed to the analysis of facial attractiveness and smile, assessing the pa-

tient as a whole<sup>1,5</sup> and learning their opinions about their own smile<sup>2,7</sup> through photographs of forced smiles and, less often, through self-assessment with mirror images, seeking to assess facial expression and spontaneous smile in order to analyze how patients act naturally in their everyday activities.<sup>1,2,5,7</sup>

When assessing facial aesthetics, the balance and proportion of facial structures are more important than the numerical values. In order to aid this assessment, it is important to use the frontal image of the entire face and simulations of conversations and facial expressions. We should not be limited only to viewing the occlusion. The set shows to emblazon the smile, masking the existent irregularities. It is indisputable that health professionals promote a stable and functional occlusion to patients, but a consensus between patient and health professional is required when designing a treatment plan, in order to define achievable therapeutic goals and not disappoint the patient regarding their treatment expectations, especially in relation to aesthetic improvements. Facial pattern and typology should be considered at the moment of diagnosis and treatment planning.

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