COMMENTARY

On “Ratings of facial attractiveness after functional appliance treatment”

Although clinicians debate the relative importance of function and attractiveness in orthodontic treatment planning,[1,2] there is no doubt that parents base their decisions primarily on the chance of improving their child’s appearance. Thus, this study by O’Neill et al provides a timely, well-controlled clinical trial of 2 procedures used to treat Class II Division 1 malocclusion. Consistent with the new philosophy of evidence-based dentistry, children were randomly assigned to the control (untreated), Fränkel, or Harvold groups. To minimize distracting influences of complexion, hair color and style, facial expression, etc, profile images were reduced to silhouettes. Panels of parents, art students, and dental students compared the attractiveness of pretreatment and posttreatment silhouettes with silhouettes of untreated controls produced over the same time period.

Although the data suggest possible increases in attractiveness for the 2 treatment groups, the differences are not statistically significant, primarily because of the extremely high variances (SD^2) in all respondent groups. Although the reliability of the judgments is extremely high, the validity of the endpoints may be questioned. The visual analog scale was anchored with examples of very attractive, average, and very unattractive images selected by only 2 orthodontists. In agreement with other studies, the authors acknowledge that the physical bases of perceiving a face as attractive or unattractive differ widely among judges from orthodontic standards.[3] The issue is also complicated by the necessary assumption for parametric statistical analysis that the intervals on the visual analog scale are subjectively equal. From that assumption, the authors might have considered the use of standard scores or correcting individual raw scores to the (mean - raw score/SD) to help minimize the effects of the large interindividual differences.

Although gender differences may not be a problem when judging 11-year-olds, the fact that neither the anchor nor the stimulus faces were gender-specific eliminates the possibility of determining if there are differences between perceived attractiveness in stimulus faces identified as male or female. Certainly there are in adults.

Perhaps a different result would have been obtained if the silhouettes were all compared with each other in a forced choice task, such as paired comparisons. Other possibilities include requesting judgments of lips, chin, and/or mandible separately, or comparing pre- and posttreatment images with a standard such as the Ricketts’ E-line. The conclusion of no differences in attractiveness resulting from treatment with functional appliances, while courageous, may be premature.

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