

The Effect of Buccal Corridor Size on Smile Attractiveness in Different Facial Types from the Viewpoint of Expert Dentists, Dental Students, and Patients Referred to Ardabil Dental School

Background: Smile, as one of the most important facial expressions, has a significant impact on facial beauty. The buccal corridor is one of the factors affecting the beauty of the smile that has been considered in recent years. The aim of this study was to investigate the effect of buccal corridor size on smile attractiveness in different facial types from the viewpoint of expert dentists, dental students, and patients.

Materials and Methods: A full face image of a woman with a mesofacial pattern and smiling was changed by Photoshop software to create 3 different types of faces, including brachyfacial, mesofacial, and dolichofacial. Then in each face pattern, 5 different buccal corridors (2%, 10%, 15%, 22% and 28%) were created. Three groups of evaluators (specialist dentists, dental students, and patients) were asked to rate these images using visual analog scale.

Results: A total of 34 specialists, 59 students, and 83 patients were participated in this study.

The highest score of experts was given to buccal corridor 15% in brachyfacial face and to buccal corridor 10% in mesofacial and dolichofacial faces. The highest score of students was given to buccal corridor 15% in brachyfacial and dolichofacial faces and to buccal corridor 10% in mesofacial face. The highest score of patients was given to buccal corridor 15% in brachyfacial and mesofacial faces and to buccal corridor 10% in dolichofacial face. The lowest score of all three evaluation groups in all three face forms was given to buccal corridor 28%. There was a significant difference among three groups of evaluators in terms of score given to the buccal corridors of 2% ($P=0.046$), 10% ($P=0.019$), 15% ($P=0.009$), and 28% ($P=0.002$) in the brachyfacial face pattern; to the buccal corridors of 2% ($P<0.001$), 15% ($P=0.042$), and 28% ($P<0.001$) in the mesofacial face pattern; and to the buccal corridors of 2% ($P=0.003$) and 28% ($P=0.038$) in the dolichofacial face pattern. The age and gender of all three groups of evaluators, the dentists' specialty, and the education level of the patients did not have a significant effect on their scores on the beauty of smiles with different buccal corridors ($P> 0.05$).

Conclusion: The results of the present study showed that although there were significant differences between the evaluators in terms of details of scoring the beauty of each of the buccal corridors in different facial patterns, but in general, all the three evaluator groups had evaluated smiles with a moderate buccal corridor more beautiful than smiles with a narrow or wide buccal corridor in all three facial patterns. In addition, the age and gender of the three evaluator groups, dentists' specialty, and the education level of patients did not have a significant effect on their evaluation of smiles with different buccal corridors in different facial patterns.

Key words: Smile, Buccal corridor, Face.