

Lips don't lie: Why there's more to a smile than just teeth

An evaluation of the influence of teeth and the labial soft tissues on the perceived aesthetics of a smile
Br Dent J 2017; **223**: 272-278 <http://dx.doi.org/10.1038/sj.bdj.2017.713>



While beauty is said to be in the eye of the beholder, in reality we tend to find near universal tacit agreements about what makes for an aesthetically pleasing smile. More and more people are considering aesthetic dental procedures such to achieve that 'Hollywood smile', and 'nice smile' can sometimes be the sole positive compliment gleaned from an otherwise unflattering picture! But could quantifying aesthetic elements help identify the perfect smile?

Chan *et al.*'s paper demonstrates there are numerous factors at play in determining a beautiful smile and despite what many dentists believe, there's a great deal more to it than teeth. By using a questionnaire, male and female dentists and non-dentists were asked to rank the aesthetic quality of five female subjects based on a series of photographs:

- Anterior teeth
- Lips at rest
- A zoomed-in smile
- Wider perspective of the smile (lower two thirds of the face).

Beauty is an inherently complex idea and this is shown in the results: one subject (C) for instance, had their teeth and lips ranked 5th (least attractive) by male respondents, yet in a smile photograph, ranked 4th! However, there is a consistency among the overall

rankings which demonstrate that quantifiable and standardised notions of a beautiful smile can exist: Subject A commonly ranked as the most attractive smile, meanwhile Subject C was ranked by the majority of respondent groups as the least attractive.

More important than the total rankings though, are the individual aspects of the smile, and the perspective from which it is viewed: three subjects, B, C and D, had similar rankings for their teeth and lips, suggesting that they have a similar weighting on the attractiveness of a smile. Subject A had results implying the lips are more of an influencing factor, while E had results to the contrary, suggesting teeth have a greater effect on a smile's attractiveness.

Finally, in the zoomed-in perspective, dentists placed more emphasis on teeth in a smile. Interestingly, widening the perspective made for a more balanced weighting of teeth and lips. Chan and co-authors suggest this could be due to dentists regularly working close-up to the teeth.

In summary, this study demonstrates that teeth and lips contribute to aesthetic appeal, possibly with similar levels of influence – therefore it's important for aesthetic dentistry and clinicians to consider the wider smile and the impact of the face, not just the teeth!

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Expert view

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A smile is composed of many 'planes' with a single aesthetic purpose. The current research by Chan and co-workers provides yet another valuable piece in the jigsaw of this complex, subjective, and often idiosyncratic topic.

The notion that dental aesthetics should incorporate soft tissues as well as the teeth is not new. In the fifties, Frush & Fisher¹ proposed that a smile can only be assessed

in relation to the surrounding soft tissues with a concept termed 'dynesthetics' (dynamic aesthetics), and correlated the appearance of the anterior sextant according to sex, age and personality (SAP) of an individual. Later, in the nineties, the seminal text by Rufenacht² stated that aesthetic treatment is carried out by the clinician at the dental perspective, but judged by the patient at the dento-facial perspective. Hence, a disparity of views for appraisal exists between the clinician and the patient that requires bridging for a successful aesthetic rehabilitation outcome. This book also stressed the importance of the lips as quintessential for aesthetic appraisal and suggested lip training exercises for rejuvenating a smile. Over the last few decades numerous authors have espoused facial aesthetics and emphasised the crucial

role played by both intra- and extra-oral soft tissues for pleasing anterior dental aesthetics.

Nowadays, treatment modalities such as perioplastic surgery for correcting 'gummy' smiles or grafting root exposure allow predictable restitution of pink aesthetics. In addition, local injectables, such as botox or dermal fillers, can dramatically complement white aesthetics in both the static and dynamic states. While some clinicians vilipend the latter as cosmetic procedures merely pampering to patients' frivolities with little therapeutic value, it is worth remembering that without pink aesthetics, white aesthetics is meaningless. ■

- 1 Frush J P, Fisher R D. The dynesthetic interpretation of the dentogenic concept. *J Prosthet Dent* 1958; **8**: 558–581.
- 2 Rufenacht C R. *Fundamentals of esthetics*. 2nd edn. Chicago: Quintessence, 1990.

Subjects ranked from most aesthetically pleasing to least pleasing according to the study (letters denote the subjects)



Author Q&A

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What led you to investigate smile aesthetics in this way?

I have been involved in teaching dentists in the areas of anterior dental aesthetics, as well as facial injectable treatment, for many years. I find that many clinicians may place a disproportionate focus on teeth at the expense of the lips and face when looking at smile enhancements. Despite this, dentists are in a very good position to be able to diagnose

and treat the perioral tissues to improve the attractiveness of a smile. There also seemed to be a lack of research in the literature that assessed smile aesthetics including the whole face and the impact that the teeth and lips have. I hoped that this study would give us better understanding of smile aesthetics and help us as clinicians better understand the needs of the patient.

Did anything particularly surprise you in the outcomes?

Two aspects of the results surprised me somewhat. The first was the uniformity in which all groups (males, females, dentists and non-dentists) ranked the attractiveness of each image in terms of teeth, lips at rest, zoomed smile and lower face smile. I would have thought there'd be more variability given the

diversity of the respondents. The second was that dentists tend to rank smiles differently when viewing a close up of the smile whilst non-dentists did not.

What is next?

I feel that the evolution of aesthetic dentistry will see more facial aesthetic treatments being included as part of any smile rehabilitation, and as dentists we are the key clinicians to drive this forward. It is exciting to see our profession broaden our understanding of the peri-oral structures and how it affects aesthetics. I would hope that there would be some follow-on studies that analyse the influence of facial aesthetics and also the dynamics of the smile so that we can better understand how to achieve the best for our patients. ■