

# Summary of: The influence of tooth colour on the perceptions of personal characteristics among female dental patients: comparisons of unmodified, decayed and 'whitened' teeth

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## FULL PAPER DETAILS

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Online article number E9

Refereed Paper – accepted 6 September 2007

DOI: 10.1038/bdj.2008.134

©British Dental Journal 2008; 204: E9

**Objective** Physical appearance plays a key role in human social interaction and the smile and teeth are important features in determining the attractiveness of a face. Furthermore, the mouth is thought to be important in social interactions. The purpose of this study was to determine the relationship between tooth colour and social perceptions. **Methods** Cross-sectional survey. One hundred and eighty female participants viewed one of six images, either a male or a female digitally altered to display one of three possible dental statuses (unmodified, decayed, or whitened). The images were rated on four personality traits: social competence (SC), intellectual ability (IA), psychological adjustment (PA), and relationship satisfaction (RS). **Results** Decayed dental appearance led to more negative judgements over the four personality categories. Whitened teeth led to more positive appraisals. The gender of the image and the demographic background of the participant did not have a significant effect on appraisals. **Conclusion** Tooth colour exerts an influence on social perceptions. The results may be explained by negative beliefs about dental decay, such as its link with poor oral hygiene.

## EDITOR'S SUMMARY

One only has to consider the current craze for the 'Hollywood smile' to confirm that straight, white, 'perfect' teeth are considered more attractive than teeth that are discoloured, misaligned or decayed. The concept of what constitutes an attractive smile may indeed appear so obvious that confirmation is unnecessary! The idea that tooth colour may affect our perceptions of others' personality traits may not be so intuitive, but if true it could add another dimension to the quest for the perfect smile. If whitened teeth make a person appear not just more aesthetically attractive, but also more intelligent, successful, happy and friendly, then having poor teeth may have a detrimental effect on a person's personal and social life and even, in extreme cases, their career prospects.

In this paper, Kershaw *et al.* set out to investigate the relationship between tooth colour and social perceptions

among young female dental patients. Participants were shown a picture of a male or female face with either normal, whitened or decayed teeth and then asked to fill in a questionnaire about the subject in the photograph. The study found that participants gave the faces with discoloured teeth poorer ratings for social competence (how popular, friendly or trustworthy they appeared), intellectual ability, relationship status and psychological adjustment (how introverted, happy or self-confident they appeared). Whiter teeth also received more positive appraisals, suggesting that tooth colour does have an influence on social perceptions.

The limitations of the study are clearly pointed out by the authors and also by Professor Robinson in his comment on the paper. These limitations do need to be taken into account, and further work in the area is needed to establish the facts of the relationship between tooth col-

our and social perceptions more clearly. What the study does highlight, however, is the role dentists play in the psychological well-being of their patients. This is already well-known in orthodontics, but is perhaps not considered as frequently in the area of tooth whitening, which is often thought of in purely aesthetic terms. As the authors point out, balancing this psychological well-being with a patient's cosmetic desire and (possibly unrealistic) expectations for a perfect smile may well become an important new challenge for dentistry.

The full paper can be accessed from the *BDJ* website ([www.bdj.co.uk](http://www.bdj.co.uk)), under 'Research' in the table of contents for Volume 204 issue 5.

Rowena Milan  
Journal Editor

DOI: 10.1038/bdj.2008.178

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**IN BRIEF**

- People make judgements about the personal characteristics of photographed individuals based on dental appearance.
- Teeth that appear whitened elicit preferable judgements in comparison to normal enamel. This has implications for whether cosmetic tooth whitening should be provided by the NHS.
- Teeth that appear decayed elicit judgements that are unfavourable in comparison to normal enamel.

**COMMENT**

The findings of this study appear to support what many people have long suspected: that people form judgements based on dental appearance. In this case faces in photographs with whiter teeth were attributed more positive personal traits than the same faces with 'normal' teeth who were, in turn, rated more highly than subjects with apparently decayed teeth. The traits in question were intellectual and social competence, psychological adjustment and satisfaction in relationships.

Before we all reach for the bleach it's worth noting that attribution studies such as these are a slightly artificial means of research. People are judged on the basis of many factors such as other aspects of appearance, age, whether they are smiling and other projections of personality. In addition, as the authors rightly acknowledge, this study is subject to a certain amount of selection and measurement bias. By conducting the study at a dental surgery the participants would be self-selected to be interested in teeth, and their awareness of teeth would be even more heightened at the time of data collection. That is to say, we do not know whether the findings would be so strong amongst ordinary people.

Nonetheless the findings are broadly compatible with a huge and robust body of psychological research that confirms the 'beauty is good' stereotype. Other research has gone beyond the use of photographs to study the effects of facial attractiveness when people interact.

With more and more dental treatment being used to enhance appearance rather than treat disease, there is a need to understand the effects it may have. The challenge to dental researchers is to find out how much dental appearance really affects these judgements in comparison to other features, and to find out whether enhancement of appearance by dentists is rewarded with better judgements.

Professor Peter G. Robinson, Oral Health and Development, University of Sheffield

**AUTHOR QUESTIONS AND ANSWERS****1. Why did you undertake this research?**

Other, similar work has looked at the negative consequences of tooth discolouration, but we wanted to use similar methodology to explore the benefits of whitened teeth. Previous work has demonstrated that assumptions are made across a range of personality traits and characteristics based on appearance, and that altered dental appearance impacts on such judgements. Therefore we were interested in examining the perceived personality traits associated with tooth whitening.

**2. What would you like to do next in this area to follow on from this work?**

It was interesting that whitened teeth had an impact that went beyond the aesthetic, and more favourable judgements were made about personality traits as well as appearance. It might be expected that people who have their teeth whitened might be perceived as vain or shallow, rather than more intelligent or better psychologically adjusted. Of course the participants may not have made the assumption that the teeth of the subject had been artificially whitened, yet it is still noteworthy that whitened teeth have such an impact on global assessments of the individual. It would be interesting to further this work by investigating if participants can recognise when tooth whitening has taken place and if they subsequently make assumptions about the 'dark side' of beauty, eg vanity etc, when they are aware. It would also be valuable to determine whether or not these findings generalise to populations other than female dental patients.