Letters to the Editor

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METHODS NOT IDEAL

Sir, I read with interest the article entitled *The effect of veneers on cosmetic improvement* by Nalbandian and Millar (*BDJ* 2009; **206:** E3). I would like to share with your readers my views on the study's methodological limitations, as well as some potential avenues for follow-up research.

As the authors concede, the retrospective method they employed is not ideal. It would have been preferable for patients to rate pre-treatment satisfaction *before* they received treatment. It is possible that patients who eventually opt for one type of veneer over another manifest different levels of pre-treatment satisfaction. This baseline level of satisfaction could influence their subsequent choice of treatment. It is also possible that, if one type of veneer tends to be associated with greater aesthetic results, patients receiving that type of veneer will 'deflate' their ratings of pre-treatment satisfaction ('I must not have been very happy before treatment, because I am very happy now'). The measurement of true pre- and post-treatment satisfaction would allow these two hypotheses to be investigated.

There are several further drawbacks to the retrospective method. Firstly, not all patients will respond to the survey. Though a 66% response rate is commendably high, Nalbandian and Millar's final sample may be biased because those who responded are probably amongst the most satisfied. Secondly, satisfaction is likely impacted by the amount of time that has lapsed since treatment. As latency increases, the patients' ability to accurately recall their level of pre-treatment satisfaction will inevitably diminish. Finally, and perhaps most importantly, satisfaction is likely inflated by treatment cost. If one type of veneer is consistently more expensive than the other it will be perceived as more efficacious. Cognitive dissonance, the uncomfortable feeling that results from holding two contradictory ideas simultaneously, will cause those who invest more (in money or time) to disregard or underreport their genuine feelings of dissatisfaction, compared to those who invest less.

If a prospective study is unfeasible, many of these drawbacks could be addressed by follow-up experiments in which panels of independent and non-expert judges view patient images and provide ratings of aesthetics and/or how satisfied they would be if the dentition depicted were their own. Presenting participants with pre- and post-operative images simultaneously and asking them to make a forced choice as to the extent to which one is more aesthetically appealing than the other will give a good measure of aesthetic improvement. Studies of facial attractiveness suggest that a sample of 15 judges is sufficient to reveal consensus. An additional group of judges could rate images one-by-one, which would (1) suggest whether the average ratings of post-op appearance of the two types of treatment differ significantly, and (2) shed light on whether the average pre-op appearance of patients is related to their eventual choice of veneer type.

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*Drs Nalbandian and Miller respond: We thank you for your comments regarding our article (*BDJ *2009; 206: E3). We had hoped for a greater response to this paper given that its conclusions differ from what might have been anticipated and are contrary to current practice. We agree that the study has methodological limitations but it was not solely a retrospective follow-up as Dr Burriss suggests. Patients who assessed their smile at the initial consultation had rated their smile at that visit on a VAS score. They were unaware of this score four years later when they then rated their post op score. This therefore enabled, as Dr Burriss suggests, the measurement of true pre- and post-treatment satisfaction which we did investigate and quantify in the paper. The point made by Dr Burriss regarding the patients' ability to accurately recall their level of pre-treatment satisfaction diminishing over time is therefore not relevant. We agree that while a 66% response rate is high the final sample may be biased because of those who responded.*

Regarding the point of cognitive dissonance patients selected the treatment following a full explanation of the options available which included costs, risks and benefits. This effect, if present, would tend to have increased the satisfaction reported with the ceramic veneers, not composite veneers, as more time and money would have been invested with the former. Cognitive dissonance would have made the lower cost composite veneers appear to be less satisfactory and so in reality an even better outcome than that reported in our paper.

We gratefully accept the suggestions for future research and the comments on this paper.

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FIVE CIRCLE TEST

Sir, I am not alone in noticing over the years an increasing number of patients