

Summary of: The psychosocial impacts of implantation on the dental aesthetics of missing anterior teeth patients

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FULL PAPER DETAILS

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Objective The aim of the current study was to investigate the psychosocial impact of dental aesthetics among patients who received anterior implant-supported prostheses. **Methods** The current study is a cross-sectional evaluation involving 115 individuals who had gone through treatment at the dental clinics of general hospitals. Participants completed the Chinese version of the psychosocial impact of dental aesthetics questionnaire (PIDAQ) before implantation and six months after crown restoration. Basic demographic information was recorded. Six months after implant crown restoration, participants were asked to self-assess their own oral aesthetics compared to before implantation. **Results** A total of 106 patients completed the study. PIDAQ scores correlated significantly with the self-assessment of the degree of oral aesthetics. Six months after crown restoration, the two factors (social impact and aesthetic attitude) decreased and the dental self-confidence score increased significantly compared to pre-implantation scores. Gender and education level significantly affected PIDAQ. **Conclusions** Anterior implant-supported prostheses significantly affected the patients' psychosocial perception. Implantation of missing anterior teeth can significantly improve patients' negative psychosocial impact of dental aesthetics. Gender and education level are correlated with the degree of improvement. The PIDAQ can be used in assessing the psychosocial effects of implantation in missing anterior teeth.

EDITOR'S SUMMARY

Although patients come to see us with a range of problems and complaints these can be broadly grouped under two categories, functional or aesthetic. Teeth in what has become known as the aesthetic zone, the upper and lower incisors and canines, have always been actually and metaphorically at the forefront of patients' concerns over their 'looks'.

Logic dictates that this is a human condition which, although possibly modified by cultural considerations applies across national boundaries. This is borne out by the current research paper from China reporting that the use of implants to support prostheses replacing anterior teeth has a positive psychological value as well as the desired functional outcome.

We know from previous research that the negative psychological and social consequences of edentulousness can

have serious quality of life implications for the patient and it is a fair extrapolation that any missing teeth in the anterior segment may have a lesser but nevertheless serious and similar impact. The advent of dental implants and their now increasingly widespread use in general as well as specialist practice means that the options for replacement are greater than ever but the relative complexity of the treatment procedure could be a disincentive for patients, as indeed may be the financial cost.

This paper indicates, however, that once placed the implants and the prosthetic replacements they support are very successful in improving psychosocial health although, interestingly, there is a differentiation between patients with higher education compared to those with a lower education level. The authors suggest that those in the higher category experienced a greater adverse

social effect in relation to the missing tooth or teeth. However, with increasing awareness of the importance and value of good oral health coupled with good appearance the likelihood of an uplift in such attitudes even in those with lesser education and/or lower socioeconomic status is also likely to follow.

Although the authors point out the limitations of this study it provides valuable additional evidence that dentistry can improve not only function and aesthetics but also positive psychological health in a variety of populations.

The full paper can be accessed from the *BDJ* website (www.bdj.co.uk), under 'Research' in the table of contents for Volume 213 issue 11.

Stephen Hancock

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IN BRIEF

- Highlights that anterior implant-supported prostheses significantly improve adverse psychological effects precipitated by missing anterior teeth.
- Reports that the 'psychosocial impact of dental aesthetics questionnaire' (PIDAQ) could be used as an important tool for assessing the treatment effects of implantation in patients with missing anterior teeth.

COMMENTARY

At a time that anterior dental aesthetics is undergoing a paradigm shift, this article by Dr Zhu *et al.* is both timely and appropriate. Whereas in the eighties and nineties the emphasis was providing contrived smiles primarily based on geometric perfection, in the last decade there has been a gradual shift towards more individual rather than a 'one size fits all' approach to anterior dental aesthetics. In addition, cosmetic dentistry based on spurious geometric smile design involved destructive, irreversible procedures for indirect porcelain laminate veneers or full coverage crowns.

Nowadays the trend is shifting towards a minimally invasive approach involving modalities such as direct resin-based composite restorations, orthodontics and implant therapy. However, similar to dental aesthetics, minimal invasive dentistry means different things to different people. For some clinicians, a minimal invasive approach is simply applying palliative varnishes and monitoring the clinical situation; while for others minimal intervention is any treatment short of extracting a tooth.

Combined with more restrained treatment options, the last few decades have also witnessed a burgeoning of dental implants for replacing missing teeth. Rather than being an esoteric, specialist therapy, dental implants are entering the realm of mainstream dental practices, offering a variety of both removable and fixed prosthetic options. In many circumstances plac-

ing implant fixtures obviates the need for preparing sound teeth as abutments for supporting fixed bridges, and provides stability for removable dentures for totally edentulous ridges.

Although the conclusions of the research by Dr Zhu may seem obvious, it does nevertheless emphasise that for many the impetus for seeking dental care is primarily aesthetics, even more than functional needs. Therefore, this study endorses the view that dental aesthetics is an integral part of prosthodontics. However, there is a moral and ethical obligation by dentists to sufficiently inform and educate patients and not to sensitise them about minor aesthetic anomalies, to which they are oblivious, for the sake of accepting the so called 'cosmetic make-over' treatment plan. It should be remembered that a thin line exists between marketing and coercion. Also, patients have the responsibility not to be swayed by peer, social or media pressure for seeking cosmetic treatment for ephemeral satisfaction at the expense of irreversible damage to their dentition. Hopefully, this message is filtering through to cosmetic dental spas that still promote an 'ideal smile' and the promise of eternal youthfulness.

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

Unlike loss of the posterior teeth, anterior tooth loss affects the quality of life in aspects of speech, chewing, aesthetics, self-esteem, psychological and social impacts for individuals. Dental implant therapy is currently one of the most commonly used methods of replacing missing dentition. Although it is assumed that there are negative consequences for individuals with missing anterior teeth, little attention has been paid to the psychosocial impact of such treatment. The psychosocial impact of dental aesthetics questionnaire (PIDAQ) is an instrument that assesses the psychosocial impact of dental aesthetics and quality of life. Previously, this questionnaire had not been used in the study of implantation of anterior teeth. The use of PIDAQ to assess the implant effects of missing anterior teeth may provide a tool to promote exchange between patients and dentists, and may help dentists to better meet patients' requirements.

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

Our current sample size is relatively small, although it can provide sufficient power. The current study also lacks long-term follow-up and only analysed limited social factors such as gender and education level. Other factors, such as skill of the operating dentist, degree of missing teeth, etc, are also very important to psychological impact. Hence, additional studies with larger sample sizes, longer follow-up time, diverse impact factors and comparison of implantation to traditional restorative treatment protocols are needed.