

Viewing positive images of dentistry reduces anticipatory anxiety in children

Does viewing positive images of dentistry affect the anticipatory dental anxiety levels of children?

Fox C, Newton JT.

A controlled trial of the impact of exposure to positive images of dentistry on anticipatory dental fear in children. Community Dent Oral Epidemiol 2006; 34:455–459

Design This was a randomised controlled trial (RCT).

Intervention Participants were randomised to viewing positive images of dentistry and dental or dentally neutral photographs for 2 min in the waiting area prior to their appointment.

Outcome measure Anticipatory anxiety assessed by the Venham Picture Test.

Results A significant difference in anticipatory dental anxiety was found between the two groups (median-positive images, 0; median-neutral images, 3; $P < 0.001$). Anticipatory anxiety was not correlated with age (0.04; $P > 0.05$) and there was no significant difference between male and female participants in their level of anticipatory anxiety (median for males, 0.5; median for females, 1; $P > 0.05$).

Conclusions Viewing positive images of dentistry and dentists results in short-term reductions in anticipatory anxiety in children.

Commentary

This trial was designed to examine the effect of positive images of dentistry upon anticipatory child dental anxiety. The work is important because children experience varying degrees of anxiety and distress during dental treatment. It would seem that the use of photographs in the practice setting provides a simple yet effective means of reducing anticipatory child dental anxiety.

The child participants in this RCT were new and continuing care patients attending a dental access centre. The participants were randomly allocated into intervention and control groups with the aid of computer-generated random numbers, which were entered into 40 sealed envelopes. Opened in sequence in accordance with patient participation, an even number determined that the participant should enter the intervention group whereas an odd number allocated an individual to the control group. The positive images were shown to the intervention-group participants whereas neutral photographs (of homes and gardens) were shown to the control group. All images were viewed for 2 min, after which all participants had their dental anxiety assessed with Venham Picture Test.¹

It was with some delight that the authors of this well-conducted trial demonstrated differences between intervention- and control-group participants with regard to their assessed dental anxiety. Despite controlling for the effects of age upon anticipatory dental

anxiety, the age of the sample did range from 5–17 years. Therefore, although a lack of effect of age upon anticipatory dental anxiety may be understood in terms of the regressive potential of the effect, it raises questions as to the appropriateness and use of Venham Picture Test for children in their adolescence.

The Venham Picture Test has been described as a “forced choice projective test”² rather than a true self-reported measure. It is composed of eight cartoon pairs, the facial expressions and posture of which represent neutral and emotional reactions to dental treatment.¹ The “forced choice” means that scores range from 0–8 and it is in relation to the scoring that problems exist with the sensitivity of the measure. The sensitivity of the picture test has been questioned because the majority of children score zero.^{2–4} The differences noted in this controlled trial must therefore be interpreted with caution. Furthermore, the intervention may inadvertently have an association with the outcome measure because both the intervention and outcome measure used pictorial methods. It would be prudent to repeat this work using a measure that does not rely on the same stimulus modality, ie, pictorial representations, such as the verbally based Child Fear Survey Schedule- Dental Subscale to assess child dental anxiety.

This well-conducted RCT may have been hindered by the choice and appropriateness of the inventory used to assess the primary outcome measure. The difficulty in which researchers find themselves over sensitivity and specificity of questionnaire assessments has been recognised by the World Health Organization (WHO). In their STEPwise approach,⁵ the WHO aims to provide a solution when choosing appropriate and sensitive assessments of primary outcome measures.

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Evidence-Based Dentistry (2007) **8**, 5–6. doi:10.1038/sj.ebd.6400493

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