Reduced dental anxiety among children with internet-based CBT

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Researchers at Karolinska Institutet have developed an accessible therapy for children and adolescents suffering from dental phobia. The study, published in the *Journal of Medical Internet Research*, shows that guided internet-based CBT is highly effective in reducing anxiety and increasing the ability to deal with dental treatment. One year later, half of the children were completely free of their phobia.

Dental anxiety often begins in childhood or adolescence, and can develop into a phobia with avoidance, strong negative feelings and thoughts aimed at dental care. Avoidance of dental care often leads to poor oral health, untreated caries or other dental problems.

Cognitive behavioural therapy (CBT) is an effective treatment for most forms of specific phobia. However, with regard to children and adolescents with dental phobia, there are organisational, financial and geographic obstacles to providing such therapy. Researchers in this study have therefore developed an internet-based CBT treatment that they have tested in an open, uncontrolled study of 18 patients between the ages of 8 and 15.

**Treatment continued for 12 weeks**

During the study, participants used an internet platform to obtain weekly online guidance from a psychologist via a chat system. Treatment continued for 12 weeks and included texts, animations and dental-related video clips. The treatment also included an exercise package with a dental mirror, probe, local anaesthetic and cannula delivered to the home of the child/parent(s) with detailed instructions for the exercises. Through therapy and guidance from the psychologist, the home-based exercises were linked to real exposure and training visits to dental clinics around Sweden.

The results show a statistically and clinically-significant increase in the children's ability to manage dental treatment. The internet-based CBT also increased children's and parents' self-efficacy, led to fewer negative thoughts and reduced anxiety aimed at dental treatment. At a one-year follow up, 53 per cent of the children were completely free of their dental phobia.

**Surprisingly strong effects**

"Even though we expected positive effects from the therapy, it was still surprising to see the scope of improvement and the strong effects of the therapy among the patients, given that they did not have a single physical meeting with the psychologist," explains Shervin Shahnavaz at Karolinska Institutet's Department of Dental Medicine who is the researcher behind the development of the therapy.

The researchers now hope to be able to repeat the results in an ongoing randomised controlled trial.

"Internet-based CBT for dental phobia in children..."
and adolescents may be an efficient form of therapy with the potential to increase access to effective treatment," says Dr. Shahnavaz.

**More information:** Shervin Shahnavaz et al. Internet-Based Cognitive Behavioral Therapy for Children and Adolescents With Dental Anxiety: Open Trial, *Journal of Medical Internet Research* (2018). [DOI: 10.2196/jmir.7803](https://doi.org/10.2196/jmir.7803)

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