

The effectiveness of Cognitive Behavioural Therapy in the reduction of dental anxiety in children

Abstracted from

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Question: Is Cognitive Behavioural Therapy (CBT) effective in reducing dental anxiety in children?

Data sources Cochrane Library, Embase, PubMed, Scopus, Web of Science, LILACS/BBO, PsycINFO, ClinicalTrials, ISRCTN registry, UK National Institute for Health and Care Excellence, International Clinical Trials Registry Platform, ProQuest and OpenGrey.

Study selection Two independent and calibrated reviewers selected randomised controlled trials investigating cognitive behavioural therapy use in dentally anxious children.

Data extraction and synthesis Risk of bias was assessed by two independent reviewers according to the Cochrane Collaboration tool. Clinical and methodological heterogeneity were assessed to determine whether a meta-analysis could be performed but the data were not similar enough and therefore a narrative synthesis is provided.

Results Six studies were included, all written in English between 1980 and 2017. Two were completed in the United States, one in Jamaica, one in Iran, one in Sweden and one in Norway and included 269 patients in total ranging from 41 months to 18 years. Two studies had high risk of bias. In five studies, CBT patients showed significantly reduced levels of anxiety. In three studies improvement was observed in cooperation/behaviour. In two studies, avoidance behaviours improved.

Conclusions CBT has been shown in published literature to have a positive effect on children's anxiety and co-operation; however the quality of evidence for this is low. There is no current consensus on which outcome measure/s should be used, which prevents meta-analysis of results. Further randomised controlled studies are required, ideally using the same outcome measures, to develop evidence based guidance on the use of CBT in dentally anxious children.

Commentary

Dental anxiety is common among children and adolescents, affecting over 50% of 12- to 15-year olds in the United Kingdom.¹ It is therefore essential that dental practitioners have an awareness of the psychological interventions that are available for these patients. Cognitive Behavioural Therapy (CBT) is a type of therapy used to help patients manage their own problems, in this case their dental anxiety, by changing the negative way they think and behave.² CBT is widely used within medicine (particularly in the field of mental health) and a recent Cochrane review by James and colleagues showed it to be effective in managing anxiety disorders in children and adolescents.³ The aim of this current review was to assess the latest evidence on the

effectiveness of CBT in reducing dental anxiety in children.

An extensive literature search was conducted, with no restriction on publication date or language. This should have ensured all relevant publications were identified, however only randomised controlled trials (RCTs) were included. The risk of bias was assessed independently using the Cochrane Collaborations Tool for Assessing Bias in Randomised Trials. Two studies were determined to be at high risk of performance bias (blinding). The small sample sizes and generally short data collection periods suggest that the overall quality of evidence for the use of CBT to reduce dental anxiety in children is currently low. In order to improve the evidence base, the authors recommended that future studies should assess the long-term effects of CBT on dental anxiety, and for these studies to use consistent outcomes and outcome measures. This would enable comparison and combination of the results of different studies and make meta-analysis possible.

The evidence base for the use of CBT for children with dental anxiety continues to grow, and there are many different formats in which it can be applied, with increasing use of digital technology – guided self-help,⁴ dental professional-led or psychologist-led, depending on the severity of the anxiety. Indeed, studies by Rodd and colleagues⁵ and Shahnnavaz and colleagues⁶ published since this review suggest that the reduction in dental anxiety following CBT can be maintained over time. The review alludes to the likely cost effectiveness of using CBT, and it can be theorised that the initial cost of providing the therapy may be offset by preventing a child from developing into a dentally anxious adult who is reliant on pharmacological approaches for dental treatment. This is not yet proven, but should be investigated in future studies.

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