



Investigating the effectiveness of pharmacological and non-pharmacological approaches to aid dental fear and anxiety in paediatric patients: a literature review



Cherise McColl adapted this article from the

literature review she conducted as part of her degree in Oral Health Science, undertaken at the University of the Highlands and Islands (UHI).

Introduction

Dental therapists (DTs) have a significant role in paediatric dentistry. One main consideration is fear and anxiety in patients. With extensive training and postgraduate courses, there are many techniques DTs can use to aid dental fear and anxiety. This literature review focused on methods DTs can carry out under their remit: Cognitive Behavioural Therapy (CBT); Behaviour Management Techniques (BMT) and inhalation sedation (RA). Over the years, different opinions throughout research have highlighted advocating various techniques to aid dental fear and anxiety in children. The evidence relating to the effectiveness of pharmacological and non-pharmacological approaches to aid in the treatment of children with dental fear and anxiety was investigated.

Review question

Does the use of non-pharmacological approaches to treating dental fear and anxiety, for paediatric patients aged three to 17, improve their cooperation compared to those where a pharmacological approach is used, such as sedation?

Methodology

An extensive search, using numerous filters, was carried out and found 83 papers of various quality levels. The inclusion and exclusion criteria were applied alongside Boolean logic to the search for papers, thus ensuring any non-relevant papers were excluded, leaving nine to be appraised. Several respected critical appraisal tools were used to ensure maximum information was obtained from each paper. There were various metrics used due to varying approaches.

Results

The accumulation of the results and the critical appraisal yielded four main themes:

Theme 1: CBT is a preferred approach to manage fear and anxiety

Theme 2: Communication is key between a dentist/clinician and the patient

Theme 3: RA is preferred over general anaesthetic (GA)

Theme 4: Age and/or gender is not a significant factor.

Discussion

The themes were discussed throughout and compared to papers with the same and/or different opinions to give overall results correlated from the studies. This assessed the evidence relating to the effectiveness of pharmacological and non-pharmacological approaches used when treating children with dental fear and anxiety. Thus, highlighting how the themes were impacted depending on the results from the studies.

- **Theme 1:** When CBT, BMT and RA were compared, CBT was preferred in two main studies. Throughout studies that supported CBT the long term benefits were emphasised, aiding dental fear and anxieties in terms of improving cooperation and reducing the phobia. Using the CBT process to identify the patient's dental fear and anxiety, the clinician was able to build a bond with the patient to overcome these
- **Theme 2:** The importance of good communication between the patient and the clinician were emphasised. The studies highlighted that as the patient became more relaxed, the alliance between clinician and patient helped to overcome their dental fear and anxiety
- **Theme 3:** When comparing RA to GA studies highlighted, a greater reduction in the children's fear and anxiety in the dental setting were noted. On assessment the GA groups' dental fear and anxiety levels remained the same before and after treatment; however, the RA groups' reduced significantly¹
- **Theme 4:** Throughout numerous studies there was no statistical significance between age and gender. There was no correlation between the groups in terms of a reduction in dental fear of the children being assessed. There was an exception as one RCT assessing BMT highlighted that children aged 7-9-years-old showed the best anxiety scores on the Facial Image Scale (FIS).²

Conclusion

Due to the varying metrics used it was difficult to give an overall picture of the best approach to

aid dental fear and anxiety. For a future review, one constant metric should be used throughout the research process.

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Useful resources

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