

INPLASY

Application of Magic Distraction Therapy for the Alleviation of Pediatric Dental Anxiety: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Lee, KT¹; Wang, W².

Corresponding author:

Wei-Li Wang

www.fifyw@gmail.com

Author Affiliation:

Department of Family Medicine,
National Cheng Kung University
Hospital, College of Medicine,
National Cheng Kung University.

ADMINISTRATIVE INFORMATION

Support - National Health Research Institute (NHRI-12A1-CG-CO-04-2225-1).

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202420074

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 February 2024 and was last updated on 18 February 2024.

INTRODUCTION

Review question / Objective To investigate the effectiveness of applying magic distraction therapy to alleviate dental anxiety in children.

Condition being studied Dental anxiety is prevalent in children and can lead to uncooperative behavior, posing a significant challenge to pediatric dental care, to address this challenge, behavioral guidance techniques of distraction have been widely used to alleviate dental anxiety in children. Magic as an illusionary art has the potential to be used as a distraction therapy. In the past, several randomized controlled trials have demonstrated the effectiveness of reducing anxiety in young patients in healthcare settings. However, studies devoted to the systematic synthesis and analysis of the results of these studies are still significantly

underdeveloped. In addition, the determinants affecting the efficacy of magic distraction therapy in reducing dental anxiety have yet to be investigated.

METHODS

Participant or population Children in dental setting.

Intervention Magic distraction therapy.

Comparator No behavioral guidance or other behavioral guidance.

Study designs to be included Randomized controlled trials.

Eligibility criteria Inclusion criteria: (1) studies involving children under 12 years of age, (2)

children undergoing dental treatments, and (3) using magic tricks as a means of distraction. Exclusion criteria: (1) combining other distractions; (2) involving hypnosis or suggestion techniques; (3) developing or evaluating new scales; and (4) conference abstracts or posters.

Author 2 - Weili Wang - Author 2 will draft the manuscript. Author 2 is the corresponding author. Email: wwwfifyw@gmail.com

Information sources All sources of information include Embase Classic & Embase, MEDLINE (Ovid), Scopus, the Cochrane Collaboration Central Register of Controlled Clinical Trials, Cochrane Systematic Reviews, and CINAHL (EBSCOhost). Authors will be contacted if data are lacking.

Main outcome(s) Changes in the scores of anxiety.

Quality assessment / Risk of bias analysis We will use the Cochrane Randomized Trials Risk of Bias Tool version 2 (RoB 2). There are two literature assessment options: intention-to-treat (intervention assignment) or per-protocol (intervention adherence). In this meta-analysis, we will choose per-protocol.

Strategy of data synthesis Considering the heterogeneity of the enrolled studies, this meta-analysis will be conducted using a random effects model using the Comprehensive Meta-Analysis Software version 4 (Biostat, Englewood, NJ). Two-tailed p-values less than 0.05 will be considered statistically significant. We will choose Hedges g and 95% confidence intervals (CIs) to quantify the primary outcome. We will assess the heterogeneity between studies using the I² and Cochran's Q statistic.

Subgroup analysis Subgroup analyses will depend on a preliminary analysis of the literature included, with initial considerations based on the type of magic distraction therapy and the type of dental treatment.

Sensitivity analysis We will conduct a leave-one-out sensitivity analysis to determine whether the pooled effect size would change significantly when a trial is excluded from the analysis.

Country(ies) involved Taiwan.

Keywords behavior management; dental anxiety; distraction technique; magic; pediatric dentistry.

Contributions of each author

Author 1 - Kuan-Ting Lee - Author 1 will draft the manuscript. Email: lgt0212@gmail.com