

A Letter Regarding Recently Published Systematic Review Comparing the Effectiveness of Manual and Rotary Root Canal Instrumentation in Primary Teeth

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International Journal of Clinical Pediatric Dentistry recently published a research paper titled "Comparison between the Effectiveness of Rotary and Manual Instrumentation in Primary Teeth: A Systematic Review."¹ The authors correctly emphasized the role of manual and rotary root canal instrumentation techniques for primary teeth in modern pediatric dentistry and importance of evaluating their efficacy through effective research. Because of their commendable research goals, we read this article with great interest; however, it appears to have few methodological errors.

One of the salient features of any systematic review is its structured protocol and design per the guidelines. This aspect needs some improvement in this research paper. There has been no mention that preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines based on the PRISMA checklist were followed for literature search.² The search strategy was depicted graphically, but it was not per the standard protocol. A systematic review is an explicit and systematic method of identification, selection, and critical appraisal of relevant research. It collects and analyzes data from the studies included in the review. To ensure a transparent reporting of systematic review and meta-analysis, PRISMA guidelines would be very helpful and should be followed. Furthermore, the protocol for this systematic review was not registered at the international prospective register of systematic reviews PROSPERO.³ PROSPERO is a database of systematic review protocols. Registration in PROSPERO can help avoiding duplication and having a peer review of the protocol to be followed.

The authors have included only those studies that were in the PubMed/Medline database. Why other databases were not searched to find out the answer to the research question raised in this systematic review? What was the method used to ascertain gray literature? This can to some extent add to a publication bias in this review. Another aspect of any systematic review is to grade the level of evidence and ascertain the risk of bias. This article presented a figure for the risk of bias, but the method utilized was not mentioned. There are risk of bias assessment tools such as new castle Ottawa scale and The Joanna Briggs Institute (JBI) critical appraisal tool, and so on that can be utilized per the review protocol. These tools help in evaluating the quality of study methodology

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and determining the bias in design, conduct, and analysis.⁴ We believe that the conclusion can be modified considering the title and aim of the study.

In the interests of brevity, I would like to conclude here by commending the authors for addressing an important research question but would humbly suggest that in the future they should give considerations to the point raised in this letter to avoid any methodological and reporting errors.

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