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Refining competency benchmarks: a scoping review of Angoff standard-setting in dental education

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Abstract

Background: Summative assessments in dental education are important for evaluating competencies and ensuring that graduates meet the required standards for independent practice and regulatory expectations through standard-setting. This scoping review aimed to appraise the current evidence on the use of the Angoff standard-setting method in dental education. **Methods:** This scoping review followed the framework developed by Arksey and O'Malley, incorporating five key stages: formulating research questions, identifying and selecting relevant studies, charting the data, and collating and summarising results. The review involved a systematic search of six databases (Google Scholar, Scopus, Web of Science, PubMed, Cochrane Library, and EMBASE) and two major dental education journals up to May 2024 using specific search terms, with duplicates removed via EndNote X9 software. Two investigators (GSSL & ARBH) independently applied the

inclusion and exclusion criteria to select relevant studies published in English language, with a third investigator (MNAM) resolving any disagreements. Data extraction was performed independently by four investigators (GSSL, ARBH, MNAM, CCF) using a Google Spreadsheet, and findings were analysed through quantitative frequency and qualitative thematic analysis. Results: Out of the 1412 records, ten articles were selected after screening. The Angoff and Modified Angoff methods showed good reliability and pass rates, although the results varied between studies. Factors such as exam difficulty, panel-item interaction, age, and repeated test attempts might have influenced score variation, while inter-rater reliability remained strong across studies using Angoff methods. Conclusion: Although the Angoff and Modified Angoff methods provide flexible, expert-driven approaches to standard-setting, their effectiveness depends on contextual factors such as assessment design, panel training, and educational objectives. Dental educators should therefore tailor implementation to programme and assessment needs rather than adopting a one-size-fits-all approach. © The Author(s) 2026.

Author keywords

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Indexed keywords

EMTREE medical terms

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