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### ASSESSING RISK OF BIAS OF CLINICAL TRIALS INCLUDED IN ORTHODONTIC SYSTEMATIC REVIEWS: CROSS SECTIONAL STUDY

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**Background and Objectives:** Assessing the methodological quality of clinical trials is an essential step when selecting the best clinical evidence and conducting systematic reviews (SRs) of orthodontic interventions. The objectives of this study were to: (1) describe all SRs published in orthodontics; and (2) identify the tools used to assess risk of bias of studies included in these SRs.

**Methods:** An electronic search of seven databases was performed. Studies were included if they were therapeutic or non-therapeutic orthodontic SRs. Data were extracted from all the included SRs on key descriptive characteristics and methodological quality assessment tools used in these SRs.

**Results:** 138 orthodontic (15 Cochrane and 123 non-Cochrane) SRs were identified. 81.9% of the SRs were categorized as therapeutic, with 92.9% examining non-drug interventions, while approximately third ( $n = 8/25$ ; 32%) of the non-therapeutic SRs were classified as epidemiological SRs. The SRs included a median of 11 studies, with a meta-analysis conducted in 31.2%, in which a median of 7 studies/ 1 RCT were included. Risk of bias assessment was performed in 60.6% of the SRs. 11 (8%) of the SRs used the Cochrane tool/Handbook, 10 (7.2%) used methodological quality items adapted from more than one risk of bias tool, while almost quarter ( $n = 22$ ; 33.3%) of the SRs used a non-validated methodological checklist.

**Conclusion:** Methodological and descriptive characteristics varied extensively. There is a clear need for more orthodontic primary studies, and for a methodological quality assessment tool designed specifically for assessing quality of orthodontic trials.