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# Effect of Clinical Parameters on Strength of Reattached Tooth Fragment in Anterior Teeth: Systematic Review and Meta-Analysis

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**Abstract :** Objective: To assess the effect of clinical parameters (bonding agent, preparation design & storage media) on the strength of reattached anterior tooth fragment. Methodology: This is a systematic review and meta-analysis for articles referred from MEDLINE, PUBMED, and GOOGLE SCHOLAR. The articles on tooth reattachment and clinical factors affecting fracture strength/bond strength/fracture resistance of the reattached tooth fragment in anterior teeth and published in English from 1999 to 2016 were included for final review. Results: Out of 120 shortlisted articles, 28 articles were included for the systematic review and meta-analysis based on 3 clinical parameters i.e. bonding agent, tooth preparation design & storage media. Forest plot & funnel plots were generated based on individual clinical parameter and their effect on strength of reattached anterior tooth fragment. Results based on analysis suggest combination of both conclusive evidence favoring the experimental group as well as in-conclusive evidence for individual parameter. Conclusion: There is limited evidence as there are fewer articles supporting each parameter in human teeth. Bonding agent had showed better outcome in selected studies.

**Keywords :** bonding agent, bond strength, fracture strength, preparation design, reattachment, storage media
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