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Title: The effects of temperature on the bond strength and microleakage of resin composite restorations: Systematic review

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Abstract: Aim: Improved strength and durability of a bond helps to prevent restoration failure as well as preventing the difficulties being passed onto the dentist and patient. To this end researchers have always been looking for ways to achieve stronger and more durable bonds. Many studies are carried out on how the strength and adhesiveness of the composite resin to teeth tissues is influenced by heat. The purpose of the current report is to review such studies in order to assist the dentists in making an informed decision based on the literature present.

Abstract: Literature review involved searches of the Electronic databases together with the printed resources such as Pubmed, Elsevier, Ovid, Iranmedex, Springer and the final year dissertations and theses. This led to the relevant articles to be identified and selected. Majority of the researches done have found heating as a way of increasing the bond strength. The degree of heat and its effect also depends on the type of composite resin and the adhesive used. In addition, different temperature rises have different results.

Conclusions: It is necessary that the dentist select the appropriate method according to the materials available and their advantages and disadvantages when higher temperatures are utilised.

bond strength, microleakage, composite resin, temperature, systematic review

Presentation: Poster