

STATE OF THE ART: Dealing with publication bias in a meta-analysis

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Meta-analysis is the statistical methodology to synthesize findings across multiple studies. However, publication bias is arguably one of the most important threats to the validity of a meta-analysis. One major consequence of publication bias is overestimation of the meta-analytic effect size. To address this, various methods have been developed to correct for publication bias in a meta-analysis and also to test for its presence.

This presentation will start with providing a short overview of evidence for the presence of publication bias in the literature. I will then introduce several methods to test and correct for publication bias in a meta-analysis. Both traditional methods (e.g., fail-safe N and the trim-and-fill method) and nowadays recommended methods (e.g., selection model approaches and regression based methods) will be discussed. Finally, I will highlight recent advances in the field and outline directions for future research.

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