

Conclusions: The phenomenon of publication bias not only occurs before submission of manuscripts, but it may also happen after submission to a journal.⁴ It still forms an issue in discussions about evidence-based medicine. Thus, publication of trial results is required by internationally applicable guidance, and ongoing discussions are needed to keep attention by stakeholders to achieve a greater transparency in the area of clinical research.

Key words: author, editor, peer review, publication bias.

Disclosure of Interest: None declared.

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PUBLICATION BIAS

V. Strüver

Hochschule Hannover, Hannover, Germany

Background: According to the Declaration of Helsinki, as well as the Statement on Public Disclosure of Clinical Trial Results of the World Health Organization, every researcher has the ethical obligation to publish research results on all trials with human participants in a complete and accurate way within 12 months after the end of the trial.^{1,2} Nevertheless, for several reasons, not all research results are published in an accurate way in case they are released at all. This phenomenon of publication bias may not only create a false impression on the reliability of clinical research business, but it may also affect the evidence of clinical conclusions about the best treatments, which are mostly based on published data and results.

Objectives: The aim of this article was to present different types of publication bias with regard to authors, peer reviewers, and editors. Already implemented approaches for a reduction in the publication bias phenomenon will be provided to strengthen confidence in the clinical research business.

Methods: Literature on publication bias for this narrative review article was identified by searching the PubMed database using the key words “publication bias in clinical research.” The search was limited to articles available as free full-text papers with publication dates later than 2010. Likewise, a Google search with the same key words was performed.

Results: Based on the reviewed literature, publication bias can be classified into 3 different types. The first type can be defined as publication bias, which occurs through the author before the submission of the manuscript to a journal in terms of nonpublication or incomplete publication of negative research results. Both other types describe publication bias after submission of the manuscript to a journal. In these cases, either the peer reviewer or the editor of a journal can cause bias during the publication process. For reducing the publication bias phenomenon in clinical research, most of the leading journals meanwhile insist on a registration of the study in public registries such as clinicaltrials.gov as a condition for successful publication.³ Also, the implementation of a blinded peer-reviewing process, in which the peer reviewer will do the review without knowing any author details, represents an improvement in publication bias.