

Publication

A systematic survey identified 36 criteria for assessing effect modification claims in randomized trials or meta-analyses

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 4510005

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Year 2019

Title A systematic survey identified 36 criteria for assessing effect modification claims in randomized trials or meta-analyses

Journal Journal of Clinical Epidemiology

Volume 113

Pages / Article-Number 159-167

Keywords Clinical trials as topic (MeSH); Epidemiologic methods (MeSH); Health care evaluation mechanisms (MeSH); Meta-analysis as topic (MeSH); Precision medicine (MeSH); Subgroup analysis

The objective of the study was to systematically survey the methodological literature and collect suggested criteria for assessing the credibility of effect modification and associated rationales.; We searched MEDLINE, Embase, and WorldCat up to March 2018 for publications providing guidance for assessing the credibility of effect modification identified in randomized trials or meta-analyses. Teams of two investigators independently identified eligible publications and extracted credibility criteria and authors' rationale, reaching consensus through discussion. We created a taxonomy of criteria that we iteratively refined during data abstraction.; We identified 150 eligible publications that provided 36 criteria and associated rationales. Frequent criteria included significant test for interaction (n=54), a priori hypothesis (n=49), providing a causal explanation (n=47), accounting for multiplicity (n=45), testing a small number of effect modifiers (n=38), and prespecification of analytic details (n=39). For some criteria, we found more than one rationale; some criteria were connected through a common rationale. For some criteria, experts disagreed regarding their suitability (e.g., added value of stratified randomization; trustworthiness of biologic rationales).; Methodologists have expended substantial intellectual energy providing criteria for critical appraisal of apparent effect modification. Our survey highlights popular criteria, expert agreement and disagreement, and where more work is needed, including testing criteria in practice.

Publisher Elsevier

ISSN/ISBN 0895-4356 ; 1878-5921

edoc-URL <https://edoc.unibas.ch/71495/>

Full Text on edoc Restricted;

Digital Object Identifier DOI 10.1016/j.jclinepi.2019.05.014

PubMed ID <http://www.ncbi.nlm.nih.gov/pubmed/31132471>

Document type (ISI) Article