

Systematic literature review in Neurosurgery

- [Recent Advances in Microfluidic Impedance Detection: Principle, Design and Applications](#)
 - [Tubular retractors in neuro-oncological surgery: a systematic review and meta-analysis](#)
 - [Emergent Endovascular Intervention for Acute Neurological Deficits Post-Carotid Endarterectomy: A Single-Institutional Analysis and Systematic Review of the Literature](#)
 - [Minimally invasive surgery versus craniotomy for intracerebral hemorrhage: An updated systematic review and meta-analysis of randomized clinical trials](#)
 - [Partial Middle Turbinate Resection Versus Preservation on Olfactory Function: A Systematic Review and Meta-Analysis](#)
 - [Comparative analysis of facial nerve outcomes in petroclival versus posterior petrous meningioma surgery: A systematic review and meta-analysis of 2884 patients](#)
 - [Helmet versus non-helmet treatment in infants with positional cranial deformation: A systematic review and meta-analysis](#)
 - [Radiation Therapy for WHO Grade 4 Adult-Type Diffuse Glioma: An ASTRO Clinical Practice Guideline](#)
-

Systematic reviews of randomized controlled trials

[Systematic reviews](#) of [randomized controlled trials](#) (RCTs) are generally considered the highest level of [evidence](#) for the relative [effectiveness](#) of [interventions](#)

[Systematic review](#), is a [literature review](#) focused on a [research](#) question that tries to identify, appraise, select and synthesize all high quality [research evidence](#) relevant to that question.

Systematic reviews (SR) and systematic reviews with [meta-analysis](#) (SRMA) can constitute the highest level of research [evidence](#).

A review of existing studies is often quicker and cheaper than embarking on a new study. Researchers use methods that are selected before one or more research questions are formulated, and then they aim to find and analyze studies that relate to and answer those questions.

Systematic reviews of high-quality [randomized controlled trials](#) are crucial to [evidence-based medicine](#).

Systematic [reviews](#) are a cornerstone of [evidence based medicine](#). Developing a comprehensive literature search is a key element in retrieving all relevant evidence available to answer a specific clinical question. Since it was shown that trials with significant results are more likely to be published in English-language journals ¹⁾

[Narrative literature review](#) articles are [publications](#) that describe and discuss the state of the science

of a specific [topic](#) or [theme](#) from a theoretical and contextual point of view.

Systematic [literature review](#) articles are considered original work because they are conducted using rigorous methodological approaches.

Steps

see [Preferred Reporting Items for Systematic Reviews and MetaAnalyses](#).

The first step in conducting a systematic review is to perform a thorough search of the literature for relevant papers. The Methodology section of a systematic review will list all of the databases and citation indexes that were searched such as Web of Science, Embase, and PubMed, and any individual journals that were searched. The titles and abstracts of identified articles are checked against pre-determined criteria for eligibility and relevance to form an inclusion set. This set will relate back to the research problem. Each included study may be assigned an objective assessment of methodological quality preferably by using methods conforming to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses ([PRISMA](#)) statement (the current guideline) or the high-quality standards of [Cochrane](#) collaboration.

Systematic reviews often, but not always, use statistical techniques (meta-analysis) to combine results of eligible studies, or at least use scoring of the levels of evidence depending on the methodology used. An additional rater may be consulted to resolve any scoring differences between raters.

Systematic review is often applied in the biomedical or healthcare context, but it can be applied in any field of research. Groups like the Campbell Collaboration are promoting the use of systematic reviews in policy-making beyond just healthcare.

A systematic review uses an objective and transparent approach for research synthesis, with the aim of minimizing bias. While many systematic reviews are based on an explicit quantitative meta-analysis of available data, there are also qualitative reviews which adhere to standards for gathering, analyzing and reporting evidence.

The EPPI-Centre has been influential in developing methods for combining both qualitative and quantitative research in systematic reviews.

The PRISMA statement suggests a standardized way to ensure a transparent and complete reporting of systematic reviews, and is now required for this kind of research by more than 170 medical journals worldwide.

Recent developments in systematic reviews include realist reviews, and the meta-narrative approach.

These approaches try to overcome the problems of methodological and epistemological heterogeneity in the diverse literatures existing on some subjects.

PROSPERO

[PROSPERO](#)

¹⁾

Egger M, Zellweger-Zähner T, Schneider M, Junker C, Lengeler C, Antes G. Language bias in randomised controlled trials published in English and German. Lancet. 1997 Aug 2;350(9074):326-9. PubMed PMID: 9251637.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=systematic_literature_review_in_neurosurgeryLast update: **2024/06/07 02:59**