Bias Assessment Tool

A **bias assessment tool** is a standardized instrument used to evaluate the **bias risk** in individual studies included in a systematic review or meta-analysis.

These tools help reviewers judge the internal validity of studies and assess how much trust can be placed in their results.

Purpose

- Identify potential sources of systematic error
- Grade the **quality** and **credibility** of included studies
- Support transparent, evidence-based conclusions

Commonly Used Tools

Tool	Target Study Design	Description
Cochrane RoB 1	Randomized Controlled Trials (RCTs)	Assesses seven domains of bias (e.g., selection, performance, detection)
Cochrane RoB 2	RCTs (updated version)	Focuses on bias at the outcome level; structured judgments with signalling questions
ROBINS-I	Non-randomized studies	Evaluates bias across seven domains before and after intervention
Newcastle-Ottawa Scale	Observational studies	Assesses selection, comparability, and outcome/exposure
AMSTAR 2	Systematic reviews	Appraisal of reviews' methodological quality, especially in healthcare