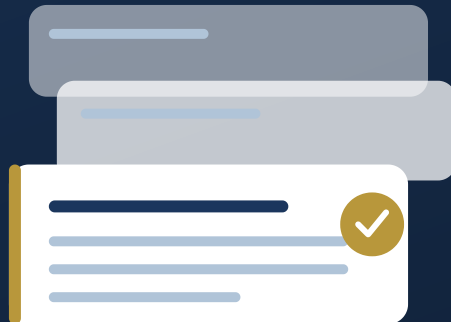


How to Do a Narrative Synthesis

How to know when a narrative synthesis is the right choice rather than a meta-analysis, and how to structure one so it is systematic and defensible rather than a list of summaries. A method from PhD methodologists.



Written by PhD methodologists researchgold.org

Not pooling is a method, not a failure

Most systematic reviews cannot combine their studies into one number, because the studies differ too much in design, population, or outcome. The answer is a structured narrative synthesis, a recognised and rigorous method, not a meta-analysis that fell through. Done well, it is systematic. Done badly, it collapses into a study-by-study list that explains nothing.

PRINCIPLE

A narrative synthesis groups, compares, and explains; it does not merely describe one study after another. The reader should come away understanding the pattern across studies, where they agree, where they diverge, and what explains the difference, rather than a sequence of paragraphs that each summarise a single paper.

The elements of a structured synthesis

- 1 Develop a preliminary synthesis**

Organise the findings into groups, tabulate them, and describe the emerging pattern. This is where you decide how studies will be grouped, by population, intervention, outcome, or setting.
- 2 Explore relationships within and between studies**

Look for what explains differences in findings. Do effects vary by study quality, dose, length of follow-up, or population? This is the analytic heart of the synthesis.
- 3 Assess the robustness of the synthesis**

Weigh how much confidence the body of evidence supports, taking risk of bias and consistency into account. A pattern built on high-risk studies is reported with appropriate caution.
- 4 Report transparently**

Make the grouping and reasoning visible. A reader should be able to see why studies were grouped as they were and how you reached your conclusions.

IS IT THE RIGHT CHOICE?

Narrative synthesis, meta-analysis, or neither

The first question is not how to do a narrative synthesis but whether you should. Three terms get confused, and choosing the wrong one is what sends a methods chapter back.

TELLING THE THREE APART

Approach	What it is	When it fits
Meta-analysis	Statistically pools results into one estimate	Studies are similar enough in design, population, and outcome to combine
Narrative synthesis	A systematic, structured synthesis in words and tables	Studies are too varied to pool, but a systematic method is still required
Narrative or literature review	An unsystematic overview of a topic	Background or commentary; not a systematic review at all

PRINCIPLE

A narrative synthesis is not the same as a narrative review. The review is an informal overview; the synthesis is a recognised systematic method with a protocol, a comprehensive search, and a transparent process. Choosing a narrative synthesis because your studies are too heterogeneous to pool is a sound methodological decision, not a downgrade from meta-analysis.

WATCH OUT FOR

Do not force a meta-analysis on studies that are too different just because pooling looks more impressive. Combining clinically or methodologically incompatible studies produces a single number that means nothing, and a reviewer will see it. If the studies do not belong together statistically, a structured narrative synthesis is the more rigorous choice.

Organise findings so the pattern is visible

A synthesis matrix is the workhorse of a good narrative synthesis. Lay the studies out so that similarities and differences jump off the page.

Synthesis matrix (one row per study, grouped by your chosen dimension)

GROUP A: [for example, studies in older adults]

Study	Design	Sample	Intervention	Direction of effect	Quality
[...]	[...]	[...]	[...]	[up / down / none]	[low/high risk]

GROUP B: [for example, studies in younger adults]

Study	Design	Sample	Intervention	Direction of effect	Quality
[...]	[...]	[...]	[...]	[up / down / none]	[low/high risk]

Then write to the pattern: where do groups agree, where do they diverge, and what study feature best explains the divergence?

WATCH OUT FOR

Resist vote counting, the temptation to conclude by tallying how many studies were significant against how many were not. A count ignores study size, quality, and the direction and magnitude of effects. Three large, well-conducted studies outweigh ten small, biased ones, and a synthesis that simply counts will mislead.

What a strong synthesis section contains

Whatever your topic, a defensible narrative synthesis covers these elements. Use them as the spine of the results section.

THE COMPONENTS OF A REPORTED NARRATIVE SYNTHESIS

Component	What it does
How studies were grouped	Tells the reader the logic behind the organisation
A summary of findings per group	Describes the pattern within each grouping
A comparison across groups	Shows where the evidence agrees and where it diverges
An explanation of differences	Links variation in findings to study features
An account of robustness	States how much confidence the evidence supports
A clear, qualified conclusion	Answers the question without overclaiming

PRINCIPLE

End with a conclusion that matches the strength of the evidence. If the studies are few, varied, and at high risk of bias, say so, and frame the finding as tentative. A synthesis that is honest about its limits is more persuasive than one that claims more than the evidence can bear.

SWiM, structured vote-counting, and rating the certainty

Narrative synthesis lost its reputation because too many were unstructured. The methods literature has since hardened: there is a reporting guideline, a defensible alternative to naive counting, and a way to rate certainty that journals increasingly require.

THE ELEMENTS THAT MAKE A WORDY SYNTHESIS DEFENSIBLE

Element	What it is	Why a reviewer expects it
SWiM guideline	Synthesis Without Meta-analysis, nine reporting items	The recognised standard for non-pooled synthesis; cite it as your reporting frame
Structured vote-counting	Counting the direction of effect with a sign test, not significance	A defensible quantitative summary when effect sizes cannot be pooled; avoids the significance fallacy
Effect-direction or harvest plot	A visual array of effect direction by outcome and study quality	Makes the pattern and its evidential weight legible without a spurious pooled number
GRADE or CERQual	A structured certainty rating (CERQual for qualitative evidence)	Tells the reader how much confidence the body of evidence warrants, transparently

WATCH OUT FOR

There is a sound middle ground between pooling and naive vote counting. Naive counting tallies how many results were statistically significant, which is invalid because it ignores power, size, and direction. *Structured* vote-counting instead counts only the direction of effect, then tests whether the proportion favouring the intervention exceeds what chance would give using a sign test. It makes no use of the unreliable significance verdict and is the Cochrane-endorsed fallback when effect sizes are unavailable. Pair it with a harvest or effect-direction plot so the reader sees study quality alongside direction, and rate the result with GRADE so the certainty is explicit rather than implied.

The narrative synthesis checklist

If every box is ticked, your synthesis will read as a structured analysis, not a list of summaries.

- You decided, and can justify, how studies are grouped.

- You built a synthesis matrix so patterns are visible at a glance.

- You compared findings across groups rather than describing studies one by one.

- You explored what study features explain differences in findings.

- You weighed risk of bias and consistency into the strength of the conclusion.

- You avoided naive vote counting, using structured direction-of-effect counting if you counted at all.

- You reported against the SWiM guideline and rated certainty with GRADE or CERQual.

- Your conclusion is qualified to match the certainty of the evidence.

WHEN THE SYNTHESIS HAS TO CONVINC

Have a structured synthesis built from your studies

If your studies are too varied to pool and you want a synthesis that is systematic, analytic, and defensible rather than a list of summaries, our PhD methodologists structure and write it with you, grounded in your extracted data and quality appraisal. You stay the author and make every judgement call.

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