Review of: "Meta-analysis"

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Potential competing interests: No potential competing interests to declare.

Thanks Arindam Basu for the detailed step-by-step guide on how to conduct a meta-analysis.[1] It comprehensively described in 8 steps how to perform a meta-analysis, subgroup analysis, and meta-regression from just a simple research idea. However, the entity for the manuscript submitted was “Definition,”[2] which the practical guides of >1,700 words appeared too much for a definition submission. The manuscript could actually be put under the category of “tutorial” or “review article.”

Here are a few strengths of the tutorial:

1. **Comprehensive Overview:** The manuscript effectively outlines the entire meta-analysis process, making it accessible to readers.
2. **Clear Explanation of Framing Questions:** The discussion on framing answerable questions using the PICO framework and SPIDER statements is well-presented.
3. **Emphasis on Data Collection:** The step-by-step approach to searching and identifying relevant studies demonstrates rigor.

If I have to re-write the definition for “meta-analysis,” I would write a concise one:*Meta-analysis is a statistical technique for combining the findings from independent studies considering the same research topic. It tries to provide a precise estimate of the effect of the measure under analysis on a particular outcome using data from all relevant studies of adequate quality.*[3]

Remember that the research topic of meta-analysis should be specific, so that comparable data could be extracted. For example, for the disease “retinopathy of prematurity,” there are many potential risk factors,[4][5][6] all could not be analyzed together in one single meta-analysis. A well-designed meta-analysis is also important to prevent the adverse “garbage in, garbage out” effect.[7][8]

References

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