Part VI: Tools for Assessing Research Study Evidence – Quality of the Studies

Questions Asked: 20 June 2024

1. How do we tailor quality assessment tools to assist reviewers in assessing study validity?

   The use of the assessment tools consolidated on the Equator Network [https://www.equator-network.org/reporting-guidelines/strobe/](https://www.equator-network.org/reporting-guidelines/strobe/) would be a good starting place. Select the tool that fist with the study design.

2. How can researchers adapt and use these tools for their projects?

   The tools are basically checklists for various components that should be included in the report from a study. Tools are based on the type of study.

3. Which study designs specifically target the NHLBI quality assessment tools?

   NHLBI supports multiple types of studied – systematic reviews, randomized control trials, cohort studies, case-control studies, etc. The assessment would be based on the tool for a specific study type.

4. What qualities of good studies would guide implementation? For example, is it possible to have a study with great evidence that may not necessarily guide implementation?

   Another important question. The assessment tools determine the quality of the study. The investigator evaluates if the study addresses the critical question. So – an important consideration is the development of the critical question matched to the appropriate study design.

5. What are the potential flaws in study methods or implementation that these tools aim to identify?

   As the tools are basically a checklist for content – the tools are assessing the completeness of the study and should be considered a resource for the overall assessment of the study by the investigator.
6. What key concepts do quality assessment tools focus on when evaluating research studies?

   Similar to above – the tools are basically a checklist for content – the tools are assessing the completeness of the study.

7. Can we get the references for the figure evidence-based? (slide 9)

   This figure as constructed with PowerPoint. There are numerous versions of the evidence pyramid.


8. How much is the Authenticity of AI used in preventing plagiarism in research?

   There are numerous plagiarism check software and programs that provide important assessment. Many are free and easily accessible after an internet search.

9. Please provide examples (articles) for Critically Appraised Topics and Critically Appraised Articles.

   In general – the peer review process is a major step for peer-reviewed publications. But it is critical for all to complete an assessment of papers and manuscripts and not rely totally on the publication process.

10. Sometimes, authors are smart at articulating and reporting studies to suit the guidelines. Therefore, based on your experience, how do you rate or discern Investigator bias?

   This is a very important question and issue. While the assessment tools assess the completeness of a study and the quality, it is critical for all of us to further evaluate a paper, published or not, based on knowledge of the area and field – and do so in a very critical manner.

11. What are your thoughts about evidence from systematic reviews and meta-analysis studies? We thought it was of superior quality.

   Systematic reviews and meta-analysis studies are indeed top of the evidence pyramid based on study design. However, it is critical for further assessment to assure the studies included are high quality; appropriately to combine the studies; and the findings have true value. Common problems for assessment include heterogeneity and publication bias.

12. Is scoping or compressive review checked like the systematic review, and how differently are they assessed?

   A scoping review seeks to present an overview of a potentially large and diverse body of literature pertaining to a broad topic. A systematic review attempts to collate empirical evidence from a relatively smaller number of studies pertaining to focused research question.
13. I am doing a systematic review, and the relevant articles have been narrowed down to 12. I have tried to pool for meta-analysis but have failed because the number has fallen to a very small number. What are my options?

This is a common situation, but your finding can be very important and publishable. You can report the review of the literature indicating a small number of studies address the critical question. You determined that it was inappropriate to combine the 12 studies – and report each study in an evidence table. You then propose the next studies needed to adequately address the critical question.

14. Is there software or a system to perform to analyze systematic studies?


15. Is there any funding/sponsorship available for attendees of this program to attend the World Hypertension Congress in February 2025?

Currently not from the Congress itself at this time – but it would be good to check with potential local sponsors for travel scholarships.