Finding A Good Research Question

Step 2. Eligibility Criteria

Which studies will and will not be included in our meta-analysis?

→ Typically defined using the PICO framework:

Population **I**ntervention **C**omparison **O**utcome

Finding A Good Research Question

Population

- What kind of people or study subjects do studies have to include to be eligible?
- Important to be precise: e.g., if you only want to include studies in young adults, what does “young adults” mean?
- If you only want to include studies on patients with a specific medical condition, how has that condition been diagnosed?
- Resort to the F and R parts of the FINER framework:
  - Is it feasible to impose such a limitation on published research?
  - Is it a relevant differentiation?

Population

Finding A Good Research Question

Intervention

- What kind of intervention (or alternatively, *exposure*) do studies have to examine?
- Important to be very clear on the type of treatment that is eligible:
  - How long or short must interventions be?
  - Who is allowed to deliver them?
  - What contents must the intervention include?

Intervention

Finding A Good Research Question

Comparison or Control Group

- To what were results of the study compared to?
  - A control group receiving an attention placebo, or a pill placebo? Waitlists? Another treatment? Or nothing at all?
- It is also possible that there is no comparison or control group at all; e.g., studies on the prevalence of disorders

Comparison

Finding A Good Research Question

Outcome

- What outcome or dependent variable do studies have to measure?
- How must the variable be measured? Is it the mean and standard deviation of questionnaire scores? Or the number of patients who died or got sick?
- When must the outcome be measured? Simply after the treatment, no matter how long the treatment was? Or after a specific time point?

Outcome

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Step 3. Additional Criteria

- **Eligible research designs**: in evidence-based medicine, only randomized controlled trials are usually permitted
- **Cultural & linguistic range:**
  - most research is based on WEIRD (western, educated, industrialized, rich and democratic) populations; certain findings may not generalize well to countries with other societal norms.
  - If we only permit studies published in English, we might omit evidence in e.g. non-Western countries
- **Publication type:** only peer-reviewed journal articles, or also, e.g., dissertations, preprints, government reports, … ?
  - Including such ”grey literature” can potentially reduce the file drawer problem; but studies may also have a greater risk of bias, and finding such evidence may be more difficult

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Team Work (25 min)

Develop your own research question!

- Find a research question in health research that could be interesting for a meta-analysis
- Use the FINER framework to identify good questions
- Develop a specific PICO for your research question!
- If necessary, define additional eligibility criteria

A “real-world” example PICO can be found below