Works-in-Progress:
systematic reviews & working with librarians

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Outline

• Review types & stages of a systematic review
• PRISMA - http://www.prisma-statement.org/
  • PRISMA-P
  • PROSPERO
  • PRISMA-S
• Librarians as partners - BLESS
Types of Reviews: [https://guides.library.ucla.edu/systematicreviews](https://guides.library.ucla.edu/systematicreviews)

Systematic - systematically search for, appraise and synthesis research evidence, often adhering to guidelines on the conduct of a review

Scoping

Mapping

Meta-analysis
<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Classification</th>
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<tbody>
<tr>
<td>1. formulate review question</td>
<td>Decide on the research question of the review.</td>
<td>preparation</td>
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<tr>
<td>2. find previous SR</td>
<td>Search for SR that answers the same question.</td>
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<td>3. write the protocol</td>
<td>Provide an objective, reproducible, sound methodology for peer review.</td>
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<td>4. devise search strategy</td>
<td>Decide on databases and keywords to find all relevant trials.</td>
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<td>5. search</td>
<td>Aim to find all relevant citations even if many irrelevant ones included.</td>
<td>retrieval</td>
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<td>6. de-duplicate</td>
<td>Remove identical citations.</td>
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<tr>
<td>7. screen abstracts</td>
<td>Based on titles and abstracts, remove definitely-irrelevant trials.</td>
<td>appraisal</td>
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<tr>
<td>8. obtain full text</td>
<td>Download, request copies from authors, inter-library loans, etc.</td>
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<tr>
<td>9. screen full text</td>
<td>Exclude irrelevant trials.</td>
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<td>10. snowball</td>
<td>Follow citations from included trials to find additional trials.</td>
<td>synthesis</td>
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<tr>
<td>11. extract data</td>
<td>Extract outcome numbers and associate with trial arm.</td>
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<td>12. synthesize data</td>
<td>Convert extracted data to common representation (usually average and SD).</td>
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<td>13. re-check literature</td>
<td>Repeat the search to find new literature published since the initial search.</td>
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<td>14. meta analyze</td>
<td>Statistically combine the results from all included trials.</td>
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<tr>
<td>15. write up review</td>
<td>Produce and publish the final report.</td>
<td>write-up</td>
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Icons: Gonzalo Bravo and Gan Khoon Lay (https://thenounproject.com)

Slide adapted from M. Rethlefsen
PRISMA

Preferred Reporting Items for Systematic Reviews and Meta-Analysis

- Reporting helps authors develop and maintain direction
- Reporting helps reviewers/readers critically appraise the final review (it is not, however, a tool that evaluates quality)
- PRISMA is essentially the framework for your published review
PRISMA-P Checklist

Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement

- [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4320440/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4320440/)
PROSPERO: Prospective registry for systematic reviews

- For reviews with at least one health related outcome
- Ability to check for work already being done in your area of interest
- Submit after protocol is finalized and before screening begins
Search Strategy Tips

- Biomedical Library Expert Search Service: #BLESS
- Must include structured search language (e.g., MESH) and keyword
- Common limits:
  - For English only studies: AND English[lang]
  - To eliminate animal only studies at the end of the string add: NOT ("animals"[MeSH] NOT "humans"[MeSH])
  - Appropriate study design limits vary by clinical question
Examples

• Not so complicated, but lots of citations: GI-PRO study (see Table 1)
• Not complicated, but less results: Atherosclerosis in systemic sclerosis (see appendix)
• Complicated: Prevalence of Root Canal Treatment (see Table 1)
Start with the Library: Systematic Review Guide

https://guides.library.ucla.edu/systematicreviews