Scoping and Systematic Reviews: Planning and Managing your Review

Grad Success Week

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May 1, 2023
1. Describe the differences between scoping, systematic and narrative review methodologies.

2. Select the most appropriate review methodology for a project and research question.

3. Recall best practices for planning, organizing, and conducting scoping and systematic reviews.
What is knowledge/evidence synthesis?

**Synthesis is:** “the contextualization and integration of research findings of individual research studies within the larger body of knowledge on the topic. A synthesis must be reproducible and transparent in its methods, using quantitative and/or qualitative methods.”

(Canadian Institutes of Health Research: [http://www.cihr-irsc.gc.ca/e/29418.html#4.1](http://www.cihr-irsc.gc.ca/e/29418.html#4.1))
### Comparing Purpose and Process

<table>
<thead>
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<th>Narrative Review</th>
<th>Scoping Review</th>
<th>Systematic Review</th>
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<td>• Comprehensive overview of the literature on a focused research question, with broad parameters.</td>
<td>• Comprehensive and critical review of the literature on a focused research question, with narrow parameters.</td>
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<td>• Typically focuses on recent/current literature</td>
<td>• Comprehensive search for all relevant literature</td>
<td>• Comprehensive search for all relevant literature. May include a meta-analysis.</td>
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<td>• Seeks to deepen understanding of a topic.</td>
<td>• Focuses on assessing and providing a comprehensive overview of the scope, size and strengths, gaps and research opportunities in a research base.</td>
<td>• Generates a conclusion regarding the impact of a specific intervention, program, or association/exposure.</td>
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Planning a Review

1. Know your scope of work.
2. Complete a preliminary scan of the literature to identify sample papers.
3. Develop/refine your research questions.
4. Choose an appropriate review methodology.
5. Assemble your team.
6. Create a review plan/protocol.
| Purpose                                      | Course Assignment  
|                                             | Research/Funding proposal  
|                                             | Inform Future Research  
|                                             | Inform a Practice or Policy Decision  
|                                             | Funded Research  
| Research Question                           | How much time do you have to complete your review?  
| Timelines                                   | Number of people on your team? Does the team have the expertise needed to complete this study? Do you have the tools (e.g. software) required to do this work?  
| Resources                                   | 
Preliminary Scans of the Literature

• HOW:
  • Quick search of the literature in one or two databases (e.g. Google Scholar)

• WHY:
  • Confirm if a prior review already exists
  • Identify disciplinary areas and scope of what has been published
  • Determine or confirm topics/questions that will be the focus of your review
  • Ensure there is enough/any literature
  • Identify terminology/language
  • Locate relevant seed/known articles
Finalize your Research Questions

1. Pre-search
2. Topic
3. Research Question
4. Question refinement
5. Pre-search
6. Question

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Choosing a Review Methodology
Methodologies – Informing your Choice

• Manuals/guidelines:

• Read previously published papers using these methodologies
Scope of Work

Review Methodology
Recalling Purpose and Process

**Narrative Review**
- Critical summary (interpretation and critique) of research on a broad topic or research area.
- Typically focuses on recent/current literature
- Seeks to deepen understanding of a topic.

**Scoping Review**
- Comprehensive overview of the literature on a focused research question, with broad parameters.
- Comprehensive search for all relevant literature
- Focuses on assessing and providing a comprehensive overview of the scope, size and strengths, gaps and research opportunities in a research base.

**Systematic Review**
- Comprehensive and critical review of the literature on a focused research question, with narrow parameters.
- Comprehensive search for all relevant literature. May include a meta-analysis.
- Generates a conclusion regarding the impact of a specific intervention, program, or association/exposure.
Assemble your Team (Scoping and Systematic Reviews)

- Content experts
- Methodology experts
- Statistics expert (for a meta-analysis)
- Project Coordinator/Manager?

Average # is 5 authors

Create a Review Plan

WHAT QUESTION?

WHY DO THIS REVIEW? (RATIONAL/ BENEFIT)

HOW WILL THE REVIEW BE COMPLETED (METHODS)

WHO WILL PARTICIPATE AND WHAT WILL THEY DO? (EXPERTISE AND TASKS)

WHEN SPECIFIC PROCESS STEPS BE COMPLETED (TIMELINES)
1. Introduction:
   • Describe your topic and outline your research question(s)

2. Methods:
   • **Types of documents** (study designs) you will include (e.g. articles, grey literature).
   • Where you will look for evidence (**databases and other information sources**).
   • **Concepts and terms** you will use to search databases for evidence.
   • Inclusion/exclusion criteria you will use to select studies to include in your synthesis.
   • What data (including outcomes or findings) you hope to extract from each study.
   • How you will select and analyze (qualitative, statistical) your studies.
   • What **software or other tools** will be used to facilitate review processes
   • How you will reduce bias (ensure review quality) in your review processes
   • Who (team members) will be involved in various stages of your review.

3. Timelines
## Searching Norms

<table>
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<th>Systematic Review</th>
<th>Scoping Review</th>
<th>Narrative Review</th>
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<tbody>
<tr>
<td>Databases (eg. CINAHL, ERIC, Medline)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Grey literature/preprints</td>
<td>Consider</td>
<td>Consider</td>
<td>Typically No</td>
</tr>
<tr>
<td>Reference list check</td>
<td>Yes</td>
<td>Consider</td>
<td>Consider</td>
</tr>
<tr>
<td>Cited references</td>
<td>Yes</td>
<td>Consider</td>
<td>Consider</td>
</tr>
<tr>
<td>Hand search journals</td>
<td>Consider</td>
<td>Not essential</td>
<td>Typically No</td>
</tr>
<tr>
<td>Contact with experts</td>
<td>Consider</td>
<td>Not essential</td>
<td>Typically No</td>
</tr>
<tr>
<td>Research in progress</td>
<td>Consider</td>
<td>Not essential</td>
<td>Typically No</td>
</tr>
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Tips for Selecting Databases

Consider database *coverage* ....
- Academic disciplines
- Types of documents (journals, grey literature)
- Publication dates, geographic
- Quality of indexing

*Search several databases*
- No database indexes all literature on a topic
- Overlap between databases is common

https://library.ucalgary.ca/az.php
- Computers/Laptops
- Access to databases and other sources of evidence
- Screening, Data Analysis and Citation Management Software (e.g. Covidence, Nvivo, Stata, Zotero/EndNote)
Organization and Documentation
Organizing/Documenting Review Processes

- Record process changes in your planning/protocol document.
- Save your search strategy in each database.
  - Create an account
  - Label the search with database name, date, and version
- Keep detailed records of all database and other searches.
  - Databases searched and date of each search.
  - Exact search strategy (Word document), including any limits applied (e.g., language or year of publication).
  - Number of results in each database.
- Ensure you are aware of/adhere to reporting guidelines/recommendations for your review methodology.
• PRISMA Statement (Systematic Reviews)
  • PRISMA (prisma-statement.org)

• PRISMA Statement (Scoping Reviews)
  • PRISMA (prisma-statement.org)

• PRISMA/P extension for Protocols
  • PRISMA (prisma-statement.org)
Getting Help
Web-Based Research Guides

- Literature Reviews: a Research Guide
- Systematic Reviews Workshop Series - companion guide
- Systematic Reviews in the Health Sciences
Ask Questions – Online Chat

https://library.ucalgary.ca
Book a Meeting with a Librarian

https://library.ucalgary.ca/consultation
Questions?
References


