Conducting a Systematic Literature Search – MDSC 508 Honours’ Thesis

Purpose of a Literature Search and Review

- Determine existing knowledge including consensus, debates and gaps
- Provide context for your research – how will your research build on existing research and how will it add to the existing body of knowledge
- Identify research designs and methodologies
- Identify other researchers in the areas of interest

Steps in Conducting a Literature Search

Consult the Bachelor of Health Sciences librarian initially and at any stage of the process

1. Translate your research question into one or more search questions
   - For each question, identify 2 or 3 key concepts
   - Identify synonyms for each key concept
   - Identify any limits such as publication date, language, study design, species to apply to search results

2. Determine the level of comprehensiveness you need for your search
   Determined mainly by your end product – an Honour’s thesis
   - Subject level
     o Which academic disciplines deal with your key concepts? Avoid prematurely excluding disciplines.
   - Time frame
     o How current do you need to be? (databases vary in currency / frequency of updates)
     o How far back in time do you need to search?

3. Identify the types of literature needed
   - Primary, secondary, tertiary literature
     o Primary – original research studies (eg. randomized controlled trials, cohort studies)
     o Secondary – review articles (synthesize and summarize primary studies)
     o Tertiary – encyclopedias, dictionaries, handbooks (distill information into concise format)
   - Journal articles, books, grey literature
     o Journals: Published, peer-reviewed journal literature
     o Books
     o Grey literature:
       - Conference proceedings
       - Government publications
       - Reports, guidelines from professional associations
       - Dissertations, theses
4. Identify and rank the specific research databases (finding tools) needed to locate the types of literature you need

- Journal articles
  U of C Library Research Databases list
  https://library.ucalgary.ca/databases
- Books
  UC Library catalogue, WorldCat
- Grey literature
  Google or Google Scholar, Proquest Digital Dissertations

5. Conduct a preliminary scanning / scoping search to:

- Increase your knowledge of content and research methodologies
- Reveal dimensions of topic you may initially not have considered
- Generate ideas and help define your topic – adjust your topic as new information found
- Help define which databases and search terms will yield the most and best information

6. Search mechanics

Pay close attention to these when searching your core databases. The Bachelor of Health Sciences librarian can help you set up a search strategy appropriate to specific databases.

Customize to each database and search interface
- Explode, Focus, Subheadings in some health databases
- Subject headings vs textwords
- Boolean search operators – AND, OR, NOT
- Truncation
- Nest search terms for a concept within parentheses

7. Evaluate search results

- Scan titles/abstracts, reference lists & look for themes or patterns: Terminology? Concepts? Key consensus or debates? Key authors? Key institutions – research or educational or non-profit? Gaps in knowledge? Research methodologies used?
- Too many results? Too few? Irrelevant? Do you need to use a study design filter?

8. Revise your search strategy as needed, and then do your in-depth search

- Broaden your strategy
- Narrow your strategy
- Irrelevant – try different databases, reframe your question, use different search terms
- Filter your search by study design

9. Document your search strategy in accordance with best practice standards (PRISMA), and organize and cite your search results using citation management software such as RefWorks or EndNote

References

