AHS 7000: TOOLS FOR SEARCHING THE LITERATURE

Sarah Clark, Librarian for Kinesiology and Recreation Management
OVERVIEW

- Libraries website
- Developing a research question
- Searching strategies
- Database selection
- Organizing information
- Open access and data management
WEBSITE ACCESS

• Use **UMnet ID** for library account, additional library search results, requests/Document Delivery, remote access to all online resources

• Use **UM student card** for physical borrowing/printing
Have you used the Libraries website for research in the past? If so, how? Was it helpful?
WEBSITE RESOURCES AND TOOLS

- **Library Search**
  - Basic or advanced option (limits for articles, books/eBooks, etc.)
  - “My Favorites” (available with sign-in) – saved OSS items/searches

- **E-Journals** (A-Z or search by subject with Browzine)
- **Search Citation** (finds a specific citation)
WEBSITE RESOURCES AND TOOLS

• **Databases A-Z**
• **Subject Guides** ([Graduate Student Resources](#), etc.)
• **Help Hub > Graduate Students**
• **Document Delivery (access 2 ways):**
  • Libraries homepage > Graduate Students > Document Delivery
  • Sign in to Library Search > Select item title > Request
SEARCHING PROCESS

• Develop a question
• Apply PICO/identify key terms
• Consider related terms or synonyms for your topic
• Apply database-relevant searching strategies and limits
You are investigating approaches that might decrease clients’ depressive symptoms. You are particularly interested in physical activity and the outcomes achieved for people with posttraumatic stress disorder.
PICO/CONCEPT MAP

• Population
• Intervention
• Comparison
• Outcome

“What are my key terms?”
You are investigating approaches that might decrease clients’ depressive symptoms. You are particularly interested in physical activity and the outcomes achieved for people with posttraumatic stress disorder.
Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?

**Population**
- posttraumatic stress disorder

**Intervention**
- physical activity

**Outcome**
- depression
Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?

Population: posttraumatic stress disorder

Intervention: physical activity

Outcome: depression

depressive symptoms

#1

#2

#3
SEARCHING STRATEGIES

Truncation

- `prevent* = prevent, prevents, prevention, preventative`
- `educat* = educate, educating, education, educated`
SEARCHING STRATEGIES

Truncation

• prevent* = prevent, prevents, prevention, preventative
• educat* = educate, educating, education, educated
• step*
SEARCHING STRATEGIES

Truncation

• prevent* = prevent, prevents, prevention, preventative
• educat* = educate, educating, education, educated
• step* = step, steps, stepping, stepped 😊
• step* = Stephan, Stephanie, Stephen X
• step* = “steps to success” X
SEARCHING STRATEGIES

Quotation Marks

• “older adult*”
• “quality of life”
• “Parkinson’s disease”
Boolean Operators

- **AND**
  - Useful for connecting your key terms
  - Narrows results

- “vitamin D” AND “bone density”
- “cardiovascular disease” AND prevent*
SEARCHING STRATEGIES

Boolean Operators

• OR
  • Useful when incorporating synonyms or words with various spellings
  • Increases your search results

• Behavior OR behaviour
• (Depression OR anxiety) AND…
SEARCHING STRATEGIES

Boolean Operators

• **NOT**
  • Useful for removing unnecessary terms

  • `step* = step, steps, stepping, stepped` 😊
  • `step* = Stephan, Stephanie, Stephen` ✗
  • `step* = “steps to success”` ✗

How can **NOT** be used to remove unnecessary results for the keyword, “step*”? 
SEARCHING STRATEGIES

Boolean Operators

• NOT
  • Useful for removing unnecessary terms

• Step* NOT ("steps to success" OR Stephanie OR Stephen OR Stephan)

• ("older adult*" NOT (child* OR teen* OR "young adult*")}) AND...
SEARCHING STRATEGIES

Subject Headings

• Reduces complications with synonyms, alternative spellings, acronyms
  • i.e. one heading for ALS, Lou Gehrig's Disease and Amyotrophic Lateral Sclerosis
• Can create opportunity to focus results further
• Available in most databases (using Advanced Search/Thesaurus); or by selecting MeSH from the dropdown menu in PubMed

• Keep in mind: indexing takes time; subject headings may not be attached to most recent publications in your field
Thesaurus located directly on search homepage for databases such as SPORTDiscus, CINAHL and AgeLine.

Option to add vocabulary directly to search.
Search results

Items: 12

1. **Physical activity** which is usually regular and done with the intention of improving or maintaining PHYSICAL FITNESS or HEALTH. Contrast with PHYSICAL EXERTION which is concerned largely with the physiologic and metabolic response to energy expenditure.
   Year introduced: 1999

2. **Cool-Down Exercise**
   Tapering-off **physical activity** from vigorous to light, to gradually return the body to pre-exercise condition and metabolic state.
   Year introduced: 2014

3. **Medial Tibial Stress Syndrome**
   SKELETAL MUSCLE pain and tenderness along the posteromedial TIBIA resulting from exercise such as running and other **physical activity**.
   Year introduced: 2011

4. **Sedentary Lifestyle**
   Usual level of **physical activity** that is less than 30 minutes of moderate-intensity activity on most days of the week.
   Year introduced: 2010
MeSH terms are also located at the bottom of an article’s record:

<table>
<thead>
<tr>
<th>Publication type, MeSH terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Publication type</strong></td>
</tr>
<tr>
<td>Review</td>
</tr>
<tr>
<td><strong>MeSH terms</strong></td>
</tr>
<tr>
<td>Aged</td>
</tr>
<tr>
<td>Aging/physiology*</td>
</tr>
<tr>
<td>Aging/psychology</td>
</tr>
<tr>
<td>Cognition/physiology*</td>
</tr>
<tr>
<td>Exercise/physiology*</td>
</tr>
<tr>
<td>Exercise/psychology</td>
</tr>
<tr>
<td>Exercise Therapy*</td>
</tr>
<tr>
<td>Humans</td>
</tr>
</tbody>
</table>

* Symbol indicates that the article focuses heavily on that topic (also known as “MAJR MeSH”)

Option for you to select “MAJR” and sub-categories (i.e. “Aging/physiology” instead of “Aging”) when searching in MeSH
Subject Headings Activity:
Use PubMed’s MeSH or a database of your choice to look up the subject heading for a term related to your research interests.

What did you find?
Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?

<table>
<thead>
<tr>
<th>Population</th>
<th>Intervention</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>posttraumatic stress disorder</td>
<td>physical activity, exercise, fitness</td>
<td>depression, depressive symptoms</td>
</tr>
</tbody>
</table>
If these are our only concepts...

Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?

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</thead>
<tbody>
<tr>
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<td>physical activity</td>
<td>depression</td>
</tr>
<tr>
<td>post-traumatic stress disorder</td>
<td>exercise</td>
<td>depressive symptoms</td>
</tr>
</tbody>
</table>

1) How would you write out the search (including search strategies)?
2) Where would you search for information on this topic?
Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?

**Population**

"posttraumatic stress disorder"

**Intervention**

"physical activity"

**Outcome**

depressi*
Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?
Q: Among individuals with posttraumatic stress disorder, does physical activity lead to a decrease in symptoms of depression?

("posttraumatic stress disorder" OR “post-traumatic stress disorder”) AND (“physical activity” OR exercise OR fitness) AND depressi*
SEARCHING STRATEGIES

1. “posttraumatic stress disorder”
2. “post-traumatic stress disorder”
3. 1 OR 2
4. “physical activity”
5. Exercise
6. Fitness
7. 4 OR 5 OR 6
8. Depressi*
9. 3 AND 7 AND 8

Also note:
- Date searched
- Database used
- Number of results
- Database limits
DATABASE SELECTION

- Will likely require multiple resources
- Specialized vs. multidisciplinary
- Google Scholar
- Subject Guides for suggestions
- Consider method of sorting (for results), subject headings, and limits to be used
<table>
<thead>
<tr>
<th>DATABASE</th>
<th>COVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINAHL</td>
<td>Clinical, theory, most nursing coverage and allied health</td>
</tr>
<tr>
<td>PubMed</td>
<td>Clinical focus, good coverage</td>
</tr>
<tr>
<td>Scopus</td>
<td>Multidisciplinary</td>
</tr>
<tr>
<td>PsycInfo</td>
<td>Mental health, psychiatry, psychology</td>
</tr>
<tr>
<td>ERIC</td>
<td>Education</td>
</tr>
<tr>
<td>SportDiscus</td>
<td>Sport/sport medicine</td>
</tr>
<tr>
<td>Sociological Abstracts</td>
<td>sociology</td>
</tr>
<tr>
<td>Cochrane Library</td>
<td>Systematic Reviews</td>
</tr>
<tr>
<td>Joanna Briggs Institute</td>
<td>Systematic Reviews, best practice</td>
</tr>
</tbody>
</table>
UPCOMING CHANGES TO PUBMED

• Improved mobile support = key factor in updates
• “Cite” option available for individual articles
  • Includes ability to export as RIS for Citation Management software
• Current (soon-to-be-former) interface will remain available for the next 6 months
• New interface already available here ("PubMed Labs")
Observe patterns with timeline

Streamlined sorting

Effects of a 12-month supervised, community-based, multi-modal exercise program followed by a 6-month research-to-practice transition on bone mineral density, trabecular micro-architecture and physical function in older adults: A randomised controlled trial.


This 18-month randomized controlled trial investigated the effects of a 12-month, community-based, supervised multi-component exercise program followed by a 6-month 'research-to-practice' transition, on areal BMD, trabecular bone microarchitecture, functional performance and falls in older adults at increased fracture risk. ...In conclusion, this study supports the effectiveness of the Osteo-cise: Strong Bones for Life program as a real-world, pragmatic, evidence-based community exercise program to improve multiple musculoskeletal health outcomes in older adults at increased fracture risk ...

Includes multiple cite styles and permalinks
APPLYING YOUR SEARCH STRING

• Combine keywords and subject headings
• Add database limits (i.e. date, language, etc.)
• Iterative process – you may need to make adjustments to the search based on your results
• Stay organized – keep track of databases searched (when?), limits, keywords, subject headings, etc.
MANAGE RESULTS

Save your search string
- Create alerts to prevent re-searching (this may require setting up a free account with database provider)

Save or export your citations
- Use a folder system in a database or Library Search’s “My Favorites”
- Option to export as RIS/import into citation management system
ORGANIZING INFORMATION

- Zotero
- Mendeley
- EndNote

- Citation Management Software Subject Guide
  - Comparison charts

- November workshops available for Mendeley, Zotero and EndNote via the Libraries Researcher Workshops Series
Tri-Council Requirement (Tri-Agency Policy, 2015)

Two Types:
- **Gold OA**
  - publishing in an OA journal (openly accessible)
  - UManitoba discounts available and growing (listed on Libraries’ [OA Guide](#))

- **Green OA**
  - publishing in a subscription-based journal and self-archiving your work in a repository

- Additional OA resources include:
  - [SHERPA/Romeo](#) (info on self-archiving policies)
  - [DOAJ](#) (directory of quality, open access, peer-reviewed journals in various fields of study)
DATA MANAGEMENT

• Benefits of a DMP:
  • May save time, money, frustration
  • Can protect data from unintentional loss
  • Helps you determine how data will be collected, coded, stored
  • Requirement of certain ERBs/funding agencies (or strongly recommended) to receive approval or funding release
  • A pillar of the anticipated Tri-Agency Research Data Management Policy
• **Online tools for generating DMPs:**
  • DMP Assistant: [https://portagenetwork.ca](https://portagenetwork.ca)
    • Recognized/recommended by Tri-Agency
    • Free to create an account
    • Provides a template (UM specific) with questions/examples
    • Collaborators can work on the same DMP
    • English and French
    • Export options include pdf, csv, html, text, docx, xml, etc.
  • All versions and plans are stored here
DATA MANAGEMENT

• **Data Storage and Security:**
  - Use the “3-2-1 backup rule”
    - 3 copies of data
    - 2 different storage media
    - 1 copy offsite

• **Data Documentation:**
  - Include additional information needed to understand and reuse your data (i.e. variable name/meaning, precision of data, units used, etc.)
DATA MANAGEMENT

• **Sharing Data:**
  • Sharing data (as part of your DMP) will depend on:
    • Grant stipulation
    • Journal’s policy (investigate licenses while creating DMP)
    • Data types you generate

• Data may be shared in repositories such as Dataverse
  • [Dataverse Researcher Guide](#) available via Libraries
  • Data sharing workshop available November 21st 2019 via Researcher Workshops Series
  • Related sessions: Intro to DMPs (Nov. 14) and Data Deposit (Nov. 7)
DATA MANAGEMENT RESOURCES

• Consult “Guidance” text boxes on DMP Assistant (UM template)

• FAQs on managing data: https://portagenetwork.ca/planning-managing-data/frequently-asked-questions


• Contact Research Services & Digital Strategies unit: libresrv@umanitoba.ca
WORKSHOP OPPORTUNITIES

• **GradSteps**
  • EndNote Advanced
  • Image Proficiency: Using Images in Publications and Presentations
  • Keeping Current, Keeping Alert

• **Researcher Workshops Series**
  • Data Deposit
  • Data Management Plans
  • Data Sharing and Licenses (Creative Commons) Essentials
Services Desk
  • Dafoe@umanitoba.ca
  • 204-474-9844

“Ask Us” virtual chat
  • umanitoba.ca/libraries

Subject Specialists
  • sarah.clark@umanitoba.ca
  • 204-228-9189