LIBRARY RESEARCH OVERVIEW

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**Learning Outcomes - You should be able to:**

- Plan and undertake a comprehensive search using UCC’s electronic resources
- Develop effective strategies to locate, critically evaluate and access relevant information.
- Develop effective approaches to keep up to date with the latest research in your area.
WHY DO WE NEED SYSTEMATIC SEARCH STRATEGIES?

- The goal is to capture every relevant study.
- It is from the search results that data is gathered for analysis and evidence identified.
- Failure to locate important studies can significantly affect results and findings.
- It is important to report your search strategy so your methodology can be reproduced.
BEGINNING A LITERATURE SEARCH CAN BE CHALLENGING:

- The amount of information my search yields is overwhelming.
- What are the best databases for my subject?
- Where can I find full-text for my search results?
- Where do I start?
- How do I know what’s important?
- How do I come up with a good research question?
- I can’t find much information on my topic.
WHERE DO I START AND HOW CAN I ENSURE I FIND THE IMPORTANT LITERATURE?

- We must prepare, conduct and record a comprehensive search strategy based upon a clear research question.
Your research question

- Provides a structure for literature review
- Informs what data is needed, how and where to locate it & how you analyse it
- Your research question should be in an area of study in which you are interested or assigned by your supervisor.
- Refine this area of study based on an exploration of the literature
- Draft your research question
Developing a Search Strategy

➢ Highlight the main concepts or keywords within your chosen topic.

➢ Identify any synonyms or alternative ways {related terms, variant spellings} to express the concepts.

➢ Combine the keywords (Boolean searching)

➢ Choose databases to search

➢ Search for information
Developing a Search Strategy con’t

➢ Truncation/wildcards/proximity searching
➢ Concept mapping
➢ Questions should be clear, feasible, connect with existing research and theories.
➢ Should have the potential to make a contribution to knowledge
Turn your question into a search strategy

- **PICO (C)**
  - **Population/ Patient/ Problem**
  - **Intervention**
  - **Comparison**
  - **Outcome**
  - **Context**

* Kuhn, Cambridge, 2014
HOW CAN STIGMA OF MENTAL ILLNESS IN DEVELOPING COUNTRIES BE IMPACTED BY EDUCATION? *

- P – mental illness
- I – education
- C – n/a
- O – stigma
- C – developing countries
MAKING IT MORE COMPREHENSIVE – SYNONYMS:

- mental illness / mental health / depression
- education / information / teaching
- stigma / prejudice / awareness / understanding
- developing countries/ low and middle income countries / lmic / least developed countries/ third world countries/ third world nations / under developed countries
CONNECTING THE TERMS – USING BOOLEAN OPERATORS

A OR B  
A AND B  
A NOT B

http://uksourcers.co.uk/2012/capital-letters-the-key-to-boolean-success/
BUILDING OUR SEARCH USING SYNONYMS:

- low and middle income countries OR lmic OR developing countries OR least developed countries

AND

- mental illness OR mental health OR depression

AND

- education OR information OR teaching

AND

- stigma OR prejudice OR awareness OR understanding
COMPREHENSIVE SEARCHING/TRACKING COMBINING

#1 low and middle income countries
#2 lmic
#3 developing countries
#4 least developed countries
#5 #1 OR #2 OR #3 OR #4
#6 mental illness
#7 mental health
#8 depression
#9 #6 OR #7 OR #8

#10 information
#11 education
#12 teaching
#13 #10 OR #11 OR #12
#14 stigma
#15 prejudice
#16 awareness
#17 understanding
#18 #14 or #15 or #16 or #17
#19 #5 AND #9 AND #13 AND #18

= RESULTS
EMPLOY A NUMBER OF THE DIFFERENT RESOURCE FEATURES TO FOCUS YOUR RESULTS

- Subject Headings - (MeSH)/EMTREE/Cinahl headings/etc
- Filters - (to find the right methodologies)
- Years of publication
- Age of population
- Inclusion / Exclusion criteria
- Truncate terms/phrases/wildcards - *, $, “”, etc.
# Subject Headings

<table>
<thead>
<tr>
<th>Database</th>
<th>Subject Headings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medline/PubMed</td>
<td>MeSH</td>
</tr>
<tr>
<td>EMBASE</td>
<td>EMTREE</td>
</tr>
<tr>
<td>CINAHL</td>
<td>CINAHL Headings</td>
</tr>
<tr>
<td>Cochrane Library</td>
<td>MeSH</td>
</tr>
<tr>
<td>PsycINFO</td>
<td>Thesaurus of Psychological Index Terms</td>
</tr>
<tr>
<td>Scopus, Web of Science</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## Tips:
- Select subject headings that are the closest match for your concepts
- Pay attention to “explode” commands – PubMed will search related headings by default

*Featherstone (2012)*
**NEXT: IDENTIFY TEXT WORDS**

Why? .. Not all citations have subject headings

<table>
<thead>
<tr>
<th>Operator</th>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>Find alternate endings</td>
<td>hosp* [will find hospital, hospitals, hospitalist, hospice, hospices, etc.]</td>
</tr>
<tr>
<td>.tw.</td>
<td>Search for this term in the Title and Abstract fields</td>
<td>anxiety.tw.</td>
</tr>
<tr>
<td>adj</td>
<td>Search for one term within x number of terms from another</td>
<td>patient adj3 anxiety [will find patient within three words of anxiety]</td>
</tr>
<tr>
<td>AND</td>
<td>Find articles where both terms appear</td>
<td>smoking AND cessation</td>
</tr>
<tr>
<td>OR</td>
<td>Find articles where either term appears</td>
<td>smoking OR tobacco</td>
</tr>
<tr>
<td>()</td>
<td>Control order of operations – commands within brackets run first</td>
<td>(smok* OR tobacco).tw.</td>
</tr>
</tbody>
</table>

WHERE TO SEARCH:

Article Databases
- Medicine
  - PubMed, Ebsco/Ovid MEDLINE, EMBASE, Cochrane Library, DARE
- Multidisciplinary
  - Scopus, Web of Science
- Nursing and Allied Health
  - CINAHL
- Other
  - AMED, PsycINFO, etc.

“Grey Literature”*
- Association, Organization & Government Reports
- LENUUS
- Conference Proceedings
- Dissertations & Theses
- Proquest Dissertations & Theses
- Web Search Engines
- Google Scholar

TRACK YOUR SEARCHES AND KEEP UP-TO-DATE:

• Sign up for an Endnote account

• Sign up for personal accounts in each database/resource

• Utilise the controlled vocabulary in the resources

• Monitor your field of research – who is publishing in that area – set up alerts.

• Attend one of our PG6009 tutorials.

• Make an appointment with your Librarian and check out our website @ http://libguides.ucc.ie/index.php.
Appendix 1. Search strategies - Cochrane Central Database of Controlled Trials (CENTRAL) - 2012 Issue 2 searched on 2 March 2012 [2145 records] - 2013 Issue 4 searched on 8 May 2013. Limited to publication year = 2012 to 2013 [98 records]

#1 MeSH descriptor Overweight explode all trees
#2 MeSH descriptor Body Weight, this term only
#3 (obes* or overweight or over-weight)
#4 MeSH descriptor Body Weight Changes explode all trees
#5 (weight near/2 (loss or lost or losing or reduc*))
#6 (weight near/2 (gain* or increas*))
#7 MeSH descriptor Body Fat Distribution explode all trees
#8 MeSH descriptor Body Mass Index explode all trees
#9 MeSH descriptor Skinfold Thickness explode all trees
#10 MeSH descriptor Waist-Hip Ratio explode all trees
#11 ("body weigh**" or bodyweigh* or "body mass**" or bodmass or "body fat**" or bodyfat*)
#12 MeSH descriptor Overnutrition, this term only
#13 (overeat* or over-eat* or overnourish* or over-nourish* or overnutrit* or over-nutrit*)
#14 (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR OR #10 OR #11 OR #12 OR #13)
#15 MeSH descriptor Child explode all trees
#16 MeSH descriptor Adolescent, this term only
#17 (child* or schoolchild* or preschool* or pre-school* or schoolage* or school-age* or schoolboy* or schoolgirl* or boy* or girl* or preteen* or teen* or adolescent* or youth* or "young people" or "young person**" or pediatr* or paediatr*)

* http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009728.pub2/abstract;jsessionid=B7765953D8D949004C8649F4641811E0.f01t01
Search Strategy (con’t)

- #18  (#15 OR #16 OR #17)
- #19  **MeSH descriptor** Exercise, this term only
- #20  **MeSH descriptor** Exercise Therapy, this term only
- #21  **MeSH descriptor** Physical Exertion, this term only
- #22  **MeSH descriptor** Motor Activity, this term only
- #23  **MeSH descriptor** Sports, this term only
- #24  (sport*)
- #25  **MeSH descriptor** Physical Education and Training **explode all trees**
- #26  (physical near/3 (activit* or education* or exertion* or training))
- #27  (exercise*)
- #28  **MeSH descriptor** Diet Therapy explode all trees
- #29  ((diet or dietering) near/5 (health* or weight*))
- #30  (calorie near/3 (control or reduc* or restriction))
- #31  "food choice**"
- #32  ("fat camp**" or "weight loss camp**")
- #33  "nutrition education"
- #34  **MeSH descriptor** Nutrition Therapy, this term only
- #35  **MeSH descriptor** Behavior Therapy, this term only
- #36  **MeSH descriptor** Cognitive Therapy, this term only
- #37  **MeSH descriptor** Psychotherapy, this term only
- #38  (behavior* near/3 (therap* or technique* or modif* or intervention*))
- #39  (cognit* near/3 (therap* or technique* or modif* or intervention*))
- #40  CBT
- #41  (psychotherap* or psycho-therap*)
SEARCH STRATEGY (CON’T)

- #42 MeSH descriptor Family Therapy, this term only
- #43 (family near/3 (therap* or intervention*))
- #44 family-based
- #45 MeSH descriptor Sedentary Lifestyle, this term only
- #46 (sedentary near/3 (lifestyle or behavio?r*))
- #47 MeSH descriptor Video Games, this term only
- #48 MeSH descriptor Television, this term only
- #49 (television or tv)
- #50 "screen time"
- #51 (psycho-social or psychosocial)
- #52 MeSH descriptor Health Promotion explode all trees
- #53 MeSH descriptor Health Education, this term only
- #54 (health* near/3 (promot* or educat* or lifestyle))
- #55 MeSH descriptor Life Style, this term only
- #56 (lifestyle* or lifestyle*)
- #57 ((video or computer) next game*)
- #58 (#19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57)
- #59 (#14 AND #18 AND #58)
ADDITIONAL SEARCH STRATEGIES & MORE INFORMATION AVAILABLE:

- Database of Abstracts of Reviews of Effects (DARE)
- SPORTDiscus (EBSCO)
- Networked Digital Library of Theses and Dissertations

See also: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009728.pub2/abstract;jsessionid=B7765953D8D949004C8649F4641811E0.f01t01
Cochrane search strategy – Reminder-systems for women with previous gestational diabetes mellitus to increase uptake of testing for type 2 diabetes or impaired glucose tolerance

Appendix 1. Search strategies

Search terms and databases

Unless otherwise stated, search terms are free text terms.

Abbreviations:

'$': stands for any character; '?' substitutes one or no character; adj: adjacent (i.e. number of words within range of search term); exp: exploded MeSH; MeSH: medical subject heading (MEDLINE medical index term); pt: publication type; sh: MeSH; tw: text word.

The Cochrane Library

#1 MeSH descriptor Reminder Systems explode all trees
#2 MeSH descriptor Follow-up studies explode all trees
#3 MeSH descriptor Telephone explode all trees
#4 MeSH descriptor Telemedicine explode all trees
#5 (remind* in All Text or recall* in All Text or letter* in All Text or e-mail in All Text or e-mail in All Text or email in All Text or email in All Text or sms in All Text or sms in All Text or telephon in All Text or telefon in All Text or phon in All Text or fon in All Text or follow-up in All Text)
#6 (colo?r in All Text and cod* in All Text) or postcard* in All Text or postal in All Text or (mobile in All Text and phon in All Text) or (internet in All Text and based in All Text)
USEFUL WEBSITES FOR SYSTEMATIC REVIEWS*

• The Cochrane Library www.cochrane.org

• The Joanna Briggs Institute
  www.joannabriggs.edu.au/pubs/systematic_reviews.php

• The Campbell Collaboration ww.campbellcollaboration.org

• The Centre for Evidence-Based Medicine www.cebm.net

• The NHS Centre for Reviews and Dissemination
  www.york.ac.uk/inst/crd

• Bandolier www.medicine.ox.ac.uk/bandolier

• PubMed Clinical Queries: Find Systematic Reviews

* Pippa Hemingway, 2009.
Thanks.

Questions?

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REFERENCES:

- Robin Featherstone, 2012, Research Librarian at Alberta Research Centre for Health Evidence, Department of Pediatrics, University of Alberta. Source: http://www.slideshare.net/featherr/how-to-conduct-a-systematic-search-10966748?qid=ff33f5ad-8f85-4035-a763-b59f19433eb3&v=default&b=&from_search=10

- Pippa Hemingway & Nic Brereton, University of Sheffield, http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/syst-review.pdf

- Isla Kuhn, Reader Services Librarian at University of Cambridge Medical Library, Systematic review how to - Easter 2014, http://www.slideshare.net/ilk21/systematic-review-how-to-easter-2014


- University of Western Australia, Information for systematic reviewers (2014), http://guides.is.uwa.edu.au/systematic_reviews/grey_literature