BUILDING SEARCH STRATEGIES & FINDING RELEVANT RESEARCH

MIDW 115 Research Methods for Midwives

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RESEARCH HELP

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Virtual Consultations Hours
   Wednesdays from 12:00-2:00pm, Jan 24; Feb 7 – April 25.
   Go to http://meet.vc.ubc.ca | meeting ID: 82838.
   For more login options and help setting up go here.

Woodward Library Reference Desk
   Mon.- Fri. 9-5 , Sat. 1-4
   wd.ref@ubc.ca | 604-822-4440

AskAway – Chat with librarians from across BC
   Library homepage → Ask Us!
RESOURCES

• Woodward Library, UBC
  • Midwifery Research Guides
  • Videos (CINAHL, Medline OVID, Tests and Measures, Library Tutorials for Nurses, PubMed Tutorial for Nurses)

• Literature Review Guide

• Systematic Review Methods Guide

• Grey Literature Guide
BY THE END OF THE CLASS YOU WILL …

- Be able to translate your PICO/PEO formatted research question into a search strategy
- Be able to find resources on your topic using PubMed
- Be able to find resources on your topic using CINAHL
- Be able to access, save, and export articles
6 ELEMENTS OF A GOOD SEARCH

- Use PICO format for clinical questions
- Search concepts one at a time to be combined later
- Select appropriate keywords *and* subject headings for key PICO elements
- Truncation/proximity operators used appropriately
- Applying limits at the very end of the search
- Verify results are relevant to your research question
PICO can help break down your question into distinct concepts that you can then build into a search strategy

**P** **Patient / population / problem** (who or what eg. ailment, population)

**I** **Intervention / exposure** (treatment, test, procedure, medication, or illness or injury if studying the effects of an illness on a population)

**C** **Comparison** (there aren’t always multiple alternatives, or you might be looking at something VS nothing)

**O** **Outcome** (the outcome you’re looking at might be to relieve or eliminate symptoms, prevent recurrence, lower mortality, find a correct diagnosis)
PICO REVIEW EXAMPLE

In people suffering from urinary tract infections, can cranberries help to prevent recurrence?

<table>
<thead>
<tr>
<th>P</th>
<th>Patient / population / problem</th>
<th>UTIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Intervention / exposure</td>
<td>Cranberries</td>
</tr>
<tr>
<td>C</td>
<td>Comparison</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Outcome</td>
<td>Prevent or decrease recurrence</td>
</tr>
</tbody>
</table>
TRANSLATING YOUR PICO QUESTION INTO A SEARCH

Problem
UTIs

Intervention
Cranberry Juice

Outcome
Reduce/Eliminate recurrence

P: UTIs
I: Cranberry Juice
O: Recurrence

Add limit?
Eg. Publication Type
### PRACTICE PUTTING A CLINICAL QUESTION INTO PICO

<table>
<thead>
<tr>
<th>Patient or Problem</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td></td>
</tr>
<tr>
<td>Comparison</td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td></td>
</tr>
</tbody>
</table>

Express your PICO elements in the form of a well-built PICO question (i.e., among P does I versus C affect O?)
What is PubMed?

PubMed is the premier biomedical database with over 26 million journal articles in the life science. The Medline database makes up the majority of the content in PubMed. Medline and additional PubMed content is also available through subscriptions to the OVID and EBSCO interfaces.

What is a database?

Databases are “large collection of data organized especially for rapid search and retrieval”\(^1\)

Databases are composed of metadata – data about the article such as title, author, abstract. When we search in PubMed or Medline we are only searching the metadata – NOT the full text of the article.
DATABASE RECORD

We search the database fields (metadata), not the actual full text article.
SUBJECT HEADINGS

• **Controlled vocabulary** indexing the article’s content. Subject specialists index the article by tagging it with controlled vocabulary from a standardized list.

• Organized in a **hierarchical structure** which allows for searching at various levels of specificity.

• Articles are **indexed to the most specific subject heading** (in Medline called MeSH) e.g. Infant, Extremely Premature
KEYWORDS

- Search terms that you create to search the author’s words
- Will return matches for that *exact* word from the title, subject headings, abstract, and some other fields
- Can return irrelevant results
  eg. Search “cancer” and get “The intrinsic fragility of DNA” by an author affiliated with Cancer Research UK
WHY SEARCH USING BOTH?

Why search Subject Headings?

• Subject headings control for synonyms, different forms of expression, spelling variations, etc.
• Efficiently and quickly connects you to the research about your topic

Why use keywords?

• It takes a few months for articles to be indexed with a subject heading
• Sometimes an appropriate subject heading is not available
• Keywords aid in finding the older literature in topics with newer MeSH terms
  e.g. Zika Virus MeSH only added in Jan 2016
  e.g. Trisomy 13 Syndrome and Trisomy 18 Syndrome added in 2018
Approaches to improving the contribution of the nursing and midwifery workforce to increasing universal access to primary health care for vulnerable populations: a systematic review.

**BACKGROUND:** Despite considerable evidence showing the importance of the nursing and midwifery workforce, there are no systematic reviews outlining how these cadres are best supported to provide universal access and reduce health care disparities at the primary health care (PHC) level. This review aims to identify nursing and midwifery policy, staffing, education and training interventions, collaborative efforts and strategies that have improved the quantity, quality and relevance of the nursing and midwifery workforce leading to health improvements for vulnerable populations.

Keyword strategy searches here, but finds only the exact terms specified if present.
PUBMED TOOLS

Clinical Queries
Single Citation Matcher
MeSH
NCBI Journals

Titles with Your Search Terms
Similar Articles
Search Details
Clipboard / Collections
Save
Export

Search builder
- MeSH
Limit your search by article type, date, or population.

Click here for more filters

Suggested articles with your terms in the title

How did PubMed interpret your search?
Cranberries for preventing urinary tract infections.

Jenison RG1, Williams OG, Craig JC.

Abstract

BACKGROUND: Cranberries have been used widely for several decades for the prevention and treatment of urinary tract infections (UTIs). This is the third update of our review first published in 1998 and updated in 2004 and 2008.

OBJECTIVES: To assess the effectiveness of cranberry products in preventing UTIs in susceptible populations.

SEARCH METHODS: We searched MEDLINE, EMBASE, the Cochrane Central Register of Controlled Trials (CENTRAL in The Cochrane Library) and the Internet. We contacted companies involved in the promotion and distribution and provided a checklist of reviews and relevant studies.

SEARCH CRITERIA: All randomised controlled trials (RCTs) or quasi-RCTs of cranberry products for the prevention of UTIs.

DATA COLLECTION AND ANALYSIS: Two authors independently assessed and extracted data. Information was collected on methods, participants, interventions and outcomes (incidence of symptomatic UTIs, positive culture results, side effects, adherence to therapy). Risk ratios (RR) were calculated where appropriate, otherwise a narrative synthesis was undertaken. Quality was assessed using the Cochrane risk of bias assessment tool.

MAIN RESULTS: This updated review includes a total of 24 studies (six cross-over studies, 11 parallel group studies with two arms; five with three arms, and two studies with a factorial design) with a total of 4473 participants. Ten studies were included in the 2000 update, and 14 studies have been added to this update. Thirteen studies (2380 participants) evaluated only cranberry juice/concentrate; nine studies (1032 participants) evaluated only cranberry tablets/capsules; one study compared cranberry juice and tablets; and one study compared cranberry capsules and tablets. The comparison/control arms were placebo, no treatment, water, methenamine hippurate, antibiotics, or lactobacillus.

Eleven studies were not included in the meta-analyses because either the design was a cross-over study and data were not reported separately for the first phase, or there was a lack of relevant data. Data included in the meta-analyses showed that, compared with placebo, water or no treatment, cranberry products did not significantly reduce the occurrence of symptomatic UTI overall (RR 0.89, 95% CI 0.71 to 1.04) or for any of the subgroups: women with recurrent UTIs (RR 0.74, 95% CI 0.42 to 1.31); older people (RR 0.75, 95% CI 0.39 to 1.44); pregnant women (RR 1.04, 95% CI 0.97 to 1.17); children with recurrent UTI (RR 0.48, 95% CI 0.19 to 1.22); cancer patients (RR 1.16 95% CI 0.75 to 1.77), or people with neuropathic bladder or spinal injury (RR 0.95, 95% CI 0.67 to 1.20). Overall heterogeneity was moderate (I² = 53%). The effectiveness of cranberry was not significantly different to antibiotics for women (RR 1.31, 95% CI 0.89, 2.02) and children (RR 0.69 95% CI 0.32 to 1.51). There was no significant difference between gastrointestinal adverse effects from cranberry product compared to those of placebo/no treatment (RR 0.93, 95% CI 0.31 to 2.27). Many studies reported low compliance and high withdrawal/dropout problems which they attributed to palatability/acceptability of the products, primarily the cranberry juice. Most studies of other cranberry products (tablets
PICO & PUBMED

Exercise:

Search in PubMed
Create an account
Save an article to a folder

Search Terms
(list subject terms (MeSH), keyword strategies (synonyms joined with Boolean operator OR, variant spellings for each concept, truncation, adj operator)

<table>
<thead>
<tr>
<th>Concept 1 (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
</tr>
<tr>
<td>OR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AND Concept 2 (I/C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
</tr>
<tr>
<td>OR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AND Concept 3 (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
</tr>
<tr>
<td>OR</td>
</tr>
</tbody>
</table>
CINAHL

Coverage of nursing and allied health literature from 1982 to present.

Includes over 1,250,000 records.

Indexes 2700+ journals, as well selected books, pamphlets, dissertations, audiovisuals in nursing, allied health, consumer health, biomedicine, alternative therapy, health sciences librarianship.
KEYWORD STRATEGIES

1. **synonyms** to describe concept.

2. Join synonyms with **Boolean operator: OR**
   e.g. labour OR childbirth

3. **Truncation: ***
   e.g. lactat* = lactate, lactation, lactating

4. **Adjacency operator: n**
   e.g. (labour OR labor) n3 (obstetric* OR birth OR childbirth OR pregnancy) = the words labour or labor are within 3 words of the words obstetric*, birth, childbirth, or pregnancy
KEYWORD STRATEGIES

Adjacency operator: n
Searches these words in relationship to each other

Truncation: *

Boolean OR operator

S3: S1 OR S2
S2: labo#r n3 (obstetric* OR birth OR childbirth OR pregnancy or vaginal or caesarian)
S1: DE "Birth" OR DE "Caesarean Birth" OR DE "Natural Childbirth" OR DE "Premature Birth"
CINAHL

Find Subject Headings

Use “Clear” to refresh search bar between searches

Add search lines in “Search History” and by using +

Create account to save articles to folders, save searches, and create alerts
FILTERS

- Limit by language, gender, age, publication date etc.
- Apply at the **end of the search.**
### CINAHL Search Example

<table>
<thead>
<tr>
<th>Search ID</th>
<th>Search Terms</th>
<th>Limiters</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>S13</td>
<td>S6 AND S10</td>
<td>Published Date: 2000/01/01-2017/12/31, Narrow by Subject: Geographical: Canada</td>
<td>View Results (541)</td>
</tr>
<tr>
<td>S12</td>
<td>S6 AND S10</td>
<td>Published Date: 2000/01/01-2017/12/31, Narrow by Subject: Geographical: USA</td>
<td>View Results (81)</td>
</tr>
<tr>
<td>S11</td>
<td>S6 AND S10</td>
<td>Published Date: 2000/01/01-2017/12/31</td>
<td>View Results (934)</td>
</tr>
<tr>
<td>S10</td>
<td>S7 OR S8 OR S9</td>
<td></td>
<td>View Results (164,17)</td>
</tr>
<tr>
<td>S9</td>
<td>NICU OR (baby OR neonatal OR newborn OR infant OR premature) n3 (intensive care OR critical care)</td>
<td></td>
<td>View Results (16,417)</td>
</tr>
<tr>
<td>S8</td>
<td>(MH &quot;Neonatal Intensive Care Nursing&quot;)</td>
<td></td>
<td>View Results (2,616)</td>
</tr>
<tr>
<td>S7</td>
<td>(MH &quot;Intensive Care Units, Neonatal&quot;)</td>
<td></td>
<td>View Results (8,676)</td>
</tr>
<tr>
<td>S6</td>
<td>S1 OR S2 OR S3 OR S4 OR S5</td>
<td></td>
<td>View Results (24,267)</td>
</tr>
<tr>
<td>S5</td>
<td>(breastfeed* OR breastfed*) OR (breast* n3 (feed OR fed OR milk))</td>
<td></td>
<td>View Results (13,931)</td>
</tr>
<tr>
<td>S4</td>
<td>(MH &quot;Milk Banking&quot;)</td>
<td></td>
<td>View Results (352)</td>
</tr>
<tr>
<td>S3</td>
<td>(MH &quot;Milk, Human&quot;) OR (MH &quot;Donor Milk&quot;)</td>
<td></td>
<td>View Results (4,657)</td>
</tr>
<tr>
<td>S2</td>
<td>(MH &quot;Lactation&quot;)</td>
<td></td>
<td>View Results (2,639)</td>
</tr>
<tr>
<td>S1</td>
<td>(MH &quot;Breast Feeding&quot;) OR (MH &quot;Breast Feeding Positions&quot;) OR (MH &quot;Latching, Breastfeeding&quot;) OR (MH &quot;Milk Expression&quot;)</td>
<td></td>
<td>View Results (17,139)</td>
</tr>
</tbody>
</table>
CINAHL EXERCISE

1. Create an account
2. Search subject headings for your 1st PICO concept
3. Search keywords for your 1st PICO concept
4. Combine your 1st concept terms with OR
5. Assess your terms by looking at the article records
6. Search for your 2nd concept (repeat above)
7. Add both concepts together with AND
8. Apply a limit
9. Save your search
SELECT UPCOMING WORKSHOPS

Full listings – [https://events.library.ubc.ca/](https://events.library.ubc.ca/)

**Health Databases**
Tues Feb 13, 2:00pm-3:30pm | BCCHRI room 3113, BC C&W

**Building your Academic Profile**
Wed Feb 4, 11:00am-12:00pm | Koerner Building, room 216

**Literature Reviews (Part 1): Great Research Starts Here!**
Fri Feb 16, 10:00-12:00pm | Woodward Library, computer lab

**Systematic Review Search Methods**
Thurs Feb 22, 10:00am-12:00pm | Woodward Library, computer lab

**Literature Reviews (Part 2): Great Writing Starts Here!**
Fri Feb 23, 10:00am-12:00pm | Woodward Library, room 103 (Sherrington Room)

**Introduction to Citation Management Using RefWorks**
Fri Feb 23, 10:00-12:00pm | Woodward Library, computer lab