A Magnet in a Haystack: Filtering the Literature for Research Studies

Doing a literature search to support evidence-based practice requires the use of search strategies to filter results from article databases.

Like a magnet in a haystack, a search strategy will help you to systematically apply limits to database search results to sift through the profusion of published literature. This guide suggests strategies for limiting search results in selected databases.
Levels of Evidence:
Evidence pyramids, like this one, depict the range of evidence available and the idea that quality and strength of evidence is hierarchical. The NYU evidence pyramid links to article databases, syntheses and other online sources of evidence:

http://tinyurl.com/nyupyramid

EBM Pyramid, Copyright 2006 Trustees of Dartmouth College and Yale University. All Rights Reserved. Produced by Jan Glover, Dave Izzo, Karen Odato, and Lei Wang.
Sources of Evidence: Article databases

(the Full A-Z list of NYU-subscribed databases is located here: http://arch.library.nyu.edu/databases/alphabetical/)

Locating evidence for health sciences topics may begin with these key health sciences databases:

• **CINAHLPlus** *(Indexes >3,800 journals from the fields of nursing & allied health, with indexing for selected journals back to 1937. Topics covered are related to nursing, PT, health education, social service, healthcare, OT, & related disciplines.)*

• **Medline (via Pubmed or Ovid)** *(Medline is the premier source for bibliographic coverage of biomedical literature. >16 million records from more than 5200 journals are indexed. More about Medline here: http://www.nlm.nih.gov/pubs/factsheets/medline.html)*

• **PsycINFO (via CSA or Ovid)** *(1887-present. Abstracts and citations to the scholarly literature in the psychological, social, behavioral, and health sciences, with material of relevance to psychologists and professionals in related fields such as psychiatry, management, business, education, social science, neuroscience, law, medicine, and social work plus many health-related fields, including all aspects of mental health, nursing, health administration, pharmacology, rehabilitation, and epidemiology.)*

• **Proquest** *(multidisciplinary resource for research on contemporary topics or for the beginning stages of a research project. Includes Joanna Briggs evidence summaries.)*
Citations retrieved from an article database may include case studies, editorials, news articles, as well as higher levels of evidence like clinical trials, systematic reviews, and meta-analyses.

You may wish to limit to a particular publication type to ensure that the research retrieved was based on a more rigorous methodology and thus reflects a higher level of evidence.

Article databases have different indexing terms and designate articles with different “publication types,” methodology, or content types.

The following instructions depict limiting by publication type (or methodology) in each selected database.
CINAHLPlus (via EbscoHost)

In CINAHLPlus you can limit your results by publication type, e.g., “Research.”

Here is how to do it:

CINAHLPlus at NYU is available from:
http://arch.library.nyu.edu/databases/proxy/NYU00202
Perform your search, e.g., type your search terms into the text entry field: **burnout professional**. Click Search.
Back on the main search page, your results will be displayed (in this case more than 2400 articles). To limit these results, click on “Search Options.”
From the options displayed highlight the publication type: **Research**. Then, click on Search.

<table>
<thead>
<tr>
<th>Publication Type</th>
<th>Meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Indicates an original (includes secondary analysis), complete research study containing data collection, methodology, discussion of results, etc.</td>
</tr>
</tbody>
</table>
Back on the main search page your search results have now been limited to the publication type: “Research.” In the sample citation below see “research: in the publication type field.

<table>
<thead>
<tr>
<th>Title:</th>
<th>Work-related stress, education and work ability among hospital nurses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors:</td>
<td>Golubic R; Milosevic M; Knezevic B; Mustajbegovic J</td>
</tr>
<tr>
<td>Affiliation:</td>
<td>Research Fellow, Department for Environmental and Occupational Health, Andrija Stampar School of Public Health, Zagreb, Croatia</td>
</tr>
<tr>
<td>Source:</td>
<td>Journal of Advanced Nursing (J ADV NURS), 2009 Oct; 65(10): 2056-66 (53 ref)</td>
</tr>
<tr>
<td>Publication Type:</td>
<td>journal article - research, tables/charts</td>
</tr>
<tr>
<td>Language:</td>
<td>English</td>
</tr>
<tr>
<td>Major Subjects:</td>
<td>Educational Status, Nursing Staff, Hospital, Stress, Occupational, Work Environment</td>
</tr>
<tr>
<td>Minor Subjects:</td>
<td>Adult; Age Factors; Analysis of Covariance; Burnout, Professional; Chi Square Test; Coefficient Alpha; Comparative Studies; Confidence Intervals; Convenience Sample; Croatia; Cross Sectional Studies; Descriptive Statistics; Factor Analysis; Female; Funding Source; Logistic Regression; Male; Mann-Whitney U Test; Middle Age; Nurse Attitudes -- Evaluation; Odds Ratio; Questionnaires; Stress, Occupational -- Classification; Summated Rating Scaling</td>
</tr>
</tbody>
</table>
| Abstract:                   | Aim. This paper is a report of a study conducted to determine which occupational stressors are present in nurses' working environment; to describe and compare occupational stress between two educational groups of nurses; to estimate which stressors and to what extent predict nurses' work ability; and to determine if educational level}
More limiting strategies in CinahlPlus:

- **Limit to publication type: Systematic Review** (indicates a research process in which a concept is identified and the research which has studied it is analyzed and evaluated. Results are synthesized to present the current state of knowledge regarding the concept. Includes integrated or integrative reviews).

- Browse the many Publication types; notice the range from case study or letter (lower levels of evidence) to Systematic Reviews and Clinical Trials (higher levels of evidence).

- Using the CINAHL “**Evidence-based Practice**” limiter includes “Research” articles (including systematic reviews, clinical trials, meta analyses, etc.) *as well as* articles from evidence-based practice journals, articles *about evidence-based practice*, and commentaries on research studies (applying practice to research). *Use with caution; every result may not be an evidence-based study.*

- Advanced Searchers: Limits by Clinical Queries filter in five research areas: Therapy, Prognosis, Review, Qualitative, Causation (Etiology)
  - High Sensitivity is the broadest search, to include ALL relevant material. It may also include less relevant materials.
  - High Specificity is the most targeted search to include only the most relevant result set, may miss some relevant materials.
  - Best Balance retrieves the best balance between Sensitivity and Specificity.
  - A detailed explanation of the strategies behind these limits can be found at [http://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx](http://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx)
Unlike CINAHLPlus, Medline does not have a publication type that simply says “Research,” but you may filter your results for higher levels of evidence by limiting to Article type, for example, “clinical trial or meta-analysis or randomized controlled trial.”

Here is how to do it:

Medline (via PubMed) at NYU is available from: http://arch.library.nyu.edu/databases/proxy/NYU00068
Perform a search. Then click on **Limits** to display the options for restricting your search.
At the next screen, select one or more limits by Type of Article (for example, clinical trial or meta-analysis or randomized controlled trial). Then click Search:

Limits
Your search results will have been restricted to articles with the publication type: Clinical Trial OR Meta-analysis, OR Randomized Controlled Trial.

Display Settings: Summary, 20 per page, Sorted by Recently Added

Limits Activated: Clinical Trial, Meta-Analysis, Randomized Controlled Trial  Change | Remove

Results: 1 to 20 of 196

   PMID: 20042833 [PubMed - indexed for MEDLINE]  
   Related articles

2. Writing about emotional dissonance in client experiences benefits human service professionals.  
   Sekiya D, Yukawa S.  
   PMID: 19938654 [PubMed - indexed for MEDLINE]  
   Related articles

   Sargent MC, Sotile W, Sotile MO, Rubash H, Barrack RL.  
   PMID: 19797575 [PubMed - indexed for MEDLINE]  
   Related articles

4. Effects of Qigong in patients with burnout: a randomized controlled trial.  
   Steniund T, Birgander LS, Lindahl B, Nilsson L, Ahlgren C.  
   J Rehabil Med. 2008 Sep 1;40(9):741-7

Back on the main search page, Limits Activated will remain in effect for future searches until you “Change” or “Remove.”
In the sample citation below, notice “randomized controlled trial” in the Publication Type field.
In Pubmed **Limits**, other choices include: Date, Language, Age group, or species: humans.

Limiting a search to the subset: “Systematic reviews” is another way to filter for highest level of evidence. When all limits have been selected, click **Search**.
Additional research methodology filters are available in PubMed, Advanced Search. Scroll to More Resources/Clinical Queries or Topic Specific Queries targeted for clinicians and health services researchers.


Health Services Research (HSR) filters (Pubmed equivalents) are listed here: http://www.nlm.nih.gov/nichsr/hedges/HSR_queries_table.html
Medline (via Ovid):

Unlike CINAHLPlus, Medline does not have a publication type that simply says “Research,” but you may filter your results for higher levels of evidence by limiting to Article type, e.g.,: “clinical trial or meta-analysis or randomized controlled trial.”

Here is how to do it:

Medline (via Ovid) at NYU is available from:
http://arch.library.nyu.edu/databases/proxy/NYU00117
Perform your search, e.g., **burnout, professional**
Back on the main search page, click on the Additional Limits icon
At the next prompt, highlight one or more **Publication Types**, e.g.: Clinical trial OR Meta-analysis OR randomized controlled trial. (Highlight more than one by holding the Control or Apple Key), Then select “Limit a Search.”
Back on the Main Search Page, your search results will have been reduced.

More Limits:

• Using the **EBM Reviews** limit will allow you to ‘OR’ together any of the following limits: Cochrane Topic Reviews, ACP Article Reviews or DARE Article Reviews.

• Limiting using **“Clinical Queries”** will restrict retrieval to clinically sound studies in nine categories provided, and the emphasis may be Sensitive (i.e., most relevant articles but probably some less relevant ones), Specific (i.e., mostly relevant articles but probably omitting a few), or Optimized (i.e., the combination of terms that optimizes the trade-off between sensitivity and specificity). A detailed explanation of the strategies behind these limits can be found at [http://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx](http://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx)
PsycINFO (via Ovid):

When you have performed a search by topic in PsycINFO, you may then choose to restrict your search results to one or more “Methodology.”

You may choose to scroll through your retrieved citations and notice the “Methodology” field to see what kind of article you are viewing. Or you may LIMIT your search electronically.

Here is how to do it:

PsycINFO (via Ovid) at NYU is available from: http://arch.library.nyu.edu/databases/proxy/NYU00201
Perform your search, e.g., sleep disorders

Back on the main search page, click on the Additional Limits icon at the bottom left of the screen.
In PsycINFO, filter using the Methodology limit. Scroll to the Methodology dialog box. Highlight a methodology (or more than one, by holding the Control or Apple Key). Select “empirical study” or "systematic review" or “meta analysis” or "treatment outcome/randomized clinical trial.” Click Limit a Search. Back on the Main Search Page, your results will have been reduced.
PsycINFO (via CSA):

When you have performed a search by topic in PsycINFO, you may then choose to restrict your search to one or more “Methodology.”

You may choose to scroll through your retrieved citations and notice the “Methodology” field to see what kind of article you are viewing. Or you may LIMIT your search electronically.

Here is how to do it:

PsycINFO (via CSA) is at NYU is available from: http://arch.library.nyu.edu/databases/proxy/NYU01622
Perform your search, e.g., sleep disorders. Click on **Search**.
In this example, initial results are more than 3940 citations. From the Results page, click on **Edit Search**.
Now, click on **Browse Methodology**
Select one or more methodologies as shown to limit your search, using **OR**. Select “empirical study” or "systematic review" or “meta analysis” or "treatment outcome/randomized clinical trial.”

Then, click **Add to Search**.
Back on the Main Search Page, you will see the choices you selected displayed in the methodology field. Now click on **Search**.
You can now browse your filtered results.
In Proquest Advanced Search, conduct a topic search (in citation and abstract) AND limit to evidence summaries (document type) to retrieve Evidence Summaries--Joanna Briggs Institute.
On the next screen your results will display available Evidence Summaries from the Joanna Briggs Institute. Click on Full Text to display evidence summary.

1. **Diabetes Mellitus: Clinician Information**
   - Abstract
   - Full text

2. **Diabetes (Pregnancy): Exercise**
   - Abstract
   - Full text

3. **Diabetes (Non-Hospitalised Patient): Management**
   - Abstract
   - Full text

4. **Diabetes Mellitus (Type 2): Exercise**
   - Abstract
   - Full text

5. **Self-Monitoring of Blood Glucose (SMBG): Efficacy and Frequency**
   - Abstract
   - Full text

6. **Hypoglycaemia Management**
   - Abstract
   - Full text

7. **Diabetes: Specialist Nurses**
For more help:

- Access health sciences Article Databases at NYU via the Evidence Pyramid
  http://tinyurl.com/nyupyramid

- Access full list of NYU subscribed databases, A to Z list:
  http://arch.library.nyu.edu/databases/alphabetical/

- Framing the research question using PICO, sample searches:

- NYU Libraries Health Research Guide:
  http://nyu.libguides.com/health