Brown School EBP Handbook

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Chapter 5: Evidence-based search filters

Once the subject search is complete, review the results. You might need to combine those results with an additional search in order to narrow the results to empirical studies. This is where the framable question, with the PICO or COPES elements, becomes critical. Depending on the type of question asked, you should combine that search with one of the following strategies. Some databases (MEDLINE) have evidence-based limits. When these limits are available, use them.

However, first a discussion about levels of evidence.

**WARNING!!!!** The top of the pyramid is not always the most helpful. If you really want to know about something, nothing beats reading the primary studies. Sometimes you just need more descriptive information. For example, you might find that a simple qualitative case report is useful when researching a question like “What are the barriers which prevent older adults from seeking depression treatment?”
This Evidence Studies Pyramid is used to illustrate the evolution of the literature. *As you move up the pyramid, the amount of available literature decreases, but the strength of evidence increases.* The pyramid serves as a guide to the hierarchy of evidence. You may not always find the highest level of evidence to answer your question. In the absence of the best evidence, you should consider moving down the pyramid to other types of studies. (Schardt & Mayer (2010) Types of studies, para.8)
Definitions for some types of studies:

**Systematic reviews** are a collation and interpretation of relevant and quality studies on a single topic or question conducted by a panel of experts in the field. The aim of the systematic review is to inform readers on the scope of research that has been conducted on the topic.

A **Meta-analysis** is a statistical analysis method that collates and analyzes the results of different studies on an intervention, experiment, or therapy as a whole. This is a robust analysis tool as it combines the results of individual studies with statistical tests of significance.

**Randomized controlled clinical trials** use an experimental design to examine the impact of an intervention, therapy, program, or policy. Participants of the study are randomly assigned to several groups, often an “experimental” group or “control group.” The experimental group is the group that receives the intervention, therapy, program or policy while the control group does not receive the intervention/therapy. The results or outcomes of the intervention are then compared between the two groups using statistical analysis.

**Primary literature and studies** report original data on a group, a specific subject, or an individual. The primary literature applies to a specific study and reports the results of a specific outcome.

**Observational studies** are a general term describing studies where the researcher basically reports that we looked at people/groups/whatever and reported what we saw in a structured way.

**Case studies/Case reports/Single system designs** examine detailed and thorough issues of concerns, trends, or phenomena of a group, organization, or a single client. The data are either collected from the participants themselves or through agency reports.

**Qualitative studies** are studies intended to understand meaning in a human way. They are interested in giving clear, understandable accounts of situations in an attempt to “make sense” of what is going on.
Filters

The following filters will help you find evidence-based or empirical studies in many databases. Specific database methods of truncation should be considered when implementing these filters.

**HINT:** Create a personal account in many of the database systems. Type in and save the search filters below. If you do this the first semester of your first year of study, it’s done. You can combine a filter with a subject search in your future class assignments.

Some databases do not accept truncation symbols inside quote marks. Remove the quote marks around the truncated phrase when searching those particular databases. For example, remove the quote marks around truncated phrases when searching ERIC or PubMed.

The University of Texas Health Sciences Library Director, Helena VonVille, has developed search filters for retrieving articles discussing specific types of studies. When you want to search CINAHL, PsycINFO, or Medline via PubMed you can copy these strategies and paste them into the search box. (HINT: Click on the tab with the database name to see the strategies.) *Best viewed using Firefox or Opera browsers.*

Note: These strategies are based on, and adaptations of, strategies developed at the McMaster Health Information Research Unit ([http://hiru.mcmaster.ca/hiru/HIRU_Hedges_MEDLINE_Strategies.aspx](http://hiru.mcmaster.ca/hiru/HIRU_Hedges_MEDLINE_Strategies.aspx)) and Leonard Gibbs’ (2003) *Evidence-based practice for the helping professions*

Meta-analysis

1. “meta-analysis” OR metaanaly* OR “meta analy*” OR “met-analysis” OR metanalyses* OR “met analysis”
2. “multicenter stud*” OR “multi-center stud*”
3. “quantitative review*” OR “quantitative overview*”
4. “Methodologic” review*” OR “methodologic overview*”
5. “Collaborative review*” OR “collaborative overview*”
6. handsearch* OR “hand search*” OR “manual search*”
7. “study synthesis” OR “synthesis of study*”
8. “meta regression” OR “meta-regression” OR metaregression
9. “systematic review*” OR “quantitative synthesis”
10. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9
Therapy/Intervention
1. “research design” OR “meta-analysis” OR metaanaly* OR “meta analy*” OR metanaly* OR “met-analysis” OR “patient selection” OR “sample size” OR “cohort analysis”
2. “clinical trial*” OR “multicenter stud*” OR “multi-center stud*” OR “random* control* trial*” OR RCT
3. “comparative stud*” OR placebo* OR “control group*”
4. random*
5. “prevention trial*”
6. “practice guideline*”
7. “feasibility stud*” OR “pilot stud*” OR “experimental stud*”
8. “clinical protocol*”
10. “double dummy” OR mask OR sham
11. “treatment outcome*” OR “treatment failure*”
12. “cross over stud*” OR “crossover stud*” OR “cross-over stud*” OR “matched pair analysis” OR “reproducibility of result*” OR “sensitivity “and” specificity” OR “predictive value of tests” OR “ROC curve”
13. 2 OR 5 OR 7 (quick search strategy)
14. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 (broad search strategy)

Effectiveness
1. random* OR RCT
2. “controlled clinical trial*”
3. “control group*” OR “experimental group*”
4. “evaluation stud*”
5. “study design” OR “experiment* design”
6. “statistical" significan*”
7. “single blind*” OR “double blind*” OR “triple blind*” OR “single-blind*” OR “double-blind*” OR “triple-blind*”
8. placebo*
9. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8
Prevention
1. “random* control* trial*” OR RCT OR “randomized clinical trial*”
2. “controlled clinical trial*” OR “multicenter stud*” OR “multi-center stud*” OR “validation stud*”
3. “control group*” OR “experimental group*”
4. “evaluation stud*” OR “program evaluat*”
5. “study design” OR “experiment* design” OR “reproducibility of result*”
6. “statistical” significan*”
7. “single blind*” OR “double blind*” OR “triple blind*” OR “single-blind*” OR “double-blind*” OR “triple-blind*”
8. placebo* OR masked OR sham OR dummy
9. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8
10. prevent*
11. 9 AND 10

Etiology/Harm
1. random*
2. “odds ratio*”
3. cohort*
4. “case control*” OR “case comparison”
5. risk* OR causa* OR harm*
6. etiolog*
7. predispose* OR “epidemiologic factor*” OR susceptab* OR etiology
8. “controlled clinical trial*” OR RCT
9. “logistic model*”
10. “practice guideline*”
11. “epidemiologic stud*” OR “retrospective stud*” OR “follow up stud*” OR “follow-up stud*” OR “followup stud*” OR “longitudinal stud*” OR “prospective stud*” OR “cross sectional stud*” OR “cross-sectional stud*” OR “correlation* stud*”
12. “case control stud*”
13. “cohort stud*”
14. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13
Prognosis/Risk/Prediction
1. pros* OR “time factor*” OR risk OR predict*
2. “cohort stud*” OR “follow up stud*” OR “followup stud*” OR “follow-up stud*” OR “longitudinal stud*” OR “prospective stud*”
3. “predictive validity” OR “predictive value” OR “survival rate”
4. morbidity OR “basic reproduction number”
5. “natural history” OR “death “and” dying”
6. course OR cure*
7. predict* OR futility OR “treatment failure”
8. outcome* OR recurrence OR recovery OR relapse* OR remission
9. “inception cohort*”
10. “risk assessment” OR “risk reduction” OR “estimating risk”
11. “survival analysis” OR “false positive” OR “false negative” OR “false-positive” OR “false-negative”
12. mortality OR susceptibility OR incidence OR prevalence
13. 1 AND (2 OR 10 OR 12) (quick search strategy)
14. 1 AND (2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12) (broad search strategy)

Diagnosis/Assessment
1. “inter-rater” OR “inter rater” OR interrater OR “inter-observer” OR “inter observer” OR interobserver OR “observer variation”
2. “false negative” OR “false positive” OR “true positive” OR “false-negative” OR “false-positive” OR “true-positive”
3. “likelihood ratio” OR “likelihood function” OR “pretest odds”
4. sensitivity OR predict*
5. “controlled clinical trial” OR RCT
7. “diagnosis, differential” OR “differential diagnosis”
8. “practice guideline*”
9. “consensus development conference”
10. random*
11. “receiver operat*” OR ROC
12. screening OR testing OR validity OR reliability
13. assess* OR diagnos* OR probab* OR accru*
14. (1 OR 3 OR 6 OR 7) AND 13 (quick search strategy)
15. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10
16. (11 OR 12 OR 15) AND 13 (broad search strategy)
Description questions (With Qualitative studies a subset)

1. “client satisfaction” OR “patient satisfaction” OR “needs assessment” OR survey*
2. “random* select*” OR “stratified random*” OR “representative sample*”
3. pretest* OR “response rate*”
4. 1 AND (2 OR 3)

Qualitative studies subset strategy:
1. “qualitative stud*”
2. “qualitative analys*”
3. “qualitative research*”
4. “content analys*”
5. “in-depth interview*” OR “in depth interview*”
6. “participant observation*”
7. “focus group*”
8. ethno* OR etic* OR emic*
9. 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8

Free Text Searching

Free text searching for evidence-based materials might also retrieve relevant articles. Use some of the following for a quick, non-comprehensive search:

- analy*
- application
- applied
- assess*
- benefi*
- “best practice**”
- comparative*
- compare*
- compari*
- EBP
- effective*
- efficac*
- empirical*
- evaluat*
- “evidence based”
- “evidence-based”
- experiment*
- fail*
- “follow through”
- “follow-through”
- “follow up”
- “follow-up”
- followup
- “gold standard”
- guideline*
- impact*
- implement*
- improv*
- ineffective*
- intervention*
- longitudinal*
- measur*
- metaanalysis
- “meta-analys**”
- “meta analys**”
- methodology
- multicenter*
- “multi-center**”
- null
- outcome*
- “pilot study”
- "population size"
- prospective*
- quantitative*
- qualitative*
- random*
- RCT
- result*
- "sample size"
- succeed*
- success*
- systematic
- trial
- unsuccessful*
References


