

FINDING RESEARCH EVIDENCE STUDENT HANDOUT 5

Search Strategy with Boolean Method

Many search resources utilize a **Boolean method** for searching. The Boolean method of searching began with George Boole (1815–1864), a mathematician who created the method for symbolic logic. Now, his method is used for most database inquiries.

Using the Boolean method, searches for research information can be simple or complex depending on the type of information and the detail desired. Boolean techniques include using the words AND, OR, and NOT in combination and with a variety of other techniques to achieve and find results.

- **AND**—Use when searching for documents containing *both* words that AND separates.
- **OR**—Use when searching for documents that contain *one* of the terms that OR separates.
- **NOT**—Use to exclude a term from the search.

Most of the time, AND, OR, and NOT do not need to be capitalized in the search. They are capitalized here in order to highlight the concepts.

Boolean Techniques

Using AND

When using AND, a search is narrowed. For example, if searching for articles on *depression AND children*, the database will pull up articles that contain both the words *depression* and *children*. AND can be used more than once in a search string; for example: *depression AND children AND prevalence AND poverty*.

Example

You are interested in finding the appropriate treatment for a teenager who is living in foster care and has PTSD due to previous child abuse.

Your first search may be:
adolescents AND PTSD

Then, you may want to narrow your search a little:
adolescents AND PTSD AND treatment AND foster care AND abuse

This search will find results that reference *adolescents*, *PTSD*, *treatment*, *foster care*, and *abuse* in the article. If too few or no references are found, a broader search can be done by using only two or three keywords at a time.

Using OR

FINDING RESEARCH EVIDENCE

STUDENT HANDOUT 5

The Boolean OR lets a search be conducted for either or both of the keywords used in a search. For example, a search for *ADHD OR children* would bring up articles that have either ADHD or children or both in the article. Using OR broadens a search and can be used to link synonyms or similar concepts.

Example

You want more information on depression or mood disorders in general.

Your search may be:
depression OR mood disorders

By using OR, you will find articles about depression or mood disorders. The OR allows you to search for resources when two terms are used in the field that generally reference the same phenomenon or are very related.

Examples:

low income OR poverty

foster care OR adoption

learning disorder OR special education

program monitoring OR management information system

Using NOT

The NOT operator narrows a search by excluding the keyword that is directly after the NOT. So when searching for *depression NOT adults*, articles would be found that are about depression, but not about depression and adults.

NOT should be used carefully in the search process because it may inadvertently exclude articles that may be of interest.

Example

You want information on therapies used to treat adolescents with substance abuse problems but not information about adolescents with substance abuse problems and co-morbid disorders.

Your search may be:
therapy AND adolescents AND substance abuse NOT co-morbid

More Complex Searches

A combination of Boolean search terms and other methods can be used to narrow down a search.

FINDING RESEARCH EVIDENCE STUDENT HANDOUT 5

Parentheses ()

Parentheses allow for a search to be conducted for more than two keywords or to combine AND and OR in your search. Just like in algebra, keywords within parentheses are executed first in the database search and then the other words outside of the parentheses.

Example

You need to find effectiveness information on a variety of different therapies for ADHD.

Your search may include:

effectiveness AND (cognitive behavioral OR parent training OR medication)

This search will find effectiveness articles on cognitive behavior therapy or parent training or medication. Articles found will contain any of these words.

Quotation marks “ ”

Quotation marks allow a search for specific terms and phrases.

Example

If you want to assess depression in a child with divorced parents, you may want to search for information on the Beck Depression Inventory.

Your search may be:

children AND divorce AND “Beck Depression Inventory”

This search will look for the phrase *Beck Depression Inventory* in relation to children and divorce.

Truncation *

This technique can also be used with the Boolean search terms and will help to expand a search. Depending on the search engine or database, the symbol used may be *, ?, or #. By using the symbol, the database will pull up the word with all possible endings.

Example

You want information on sexual promiscuity and adolescents.

Your search may include:

sex AND adolescen*

By adding the “*” you will search for all possible endings to adolescen*, including *adolescent*, *adolescence*, and *adolescents*.

FINDING RESEARCH EVIDENCE STUDENT HANDOUT 5

Advanced Searches

Once articles or documents have been found that are related to the research to practice question, the search can be narrowed even more. AND, NOT, and OR may be used, or the search can be limited in other ways. Depending on the database, a search can be limited by the publishing date of the article or journal, the author, or the title.