



Prevention Technology Transfer Center Network Funded by Substance Abuse and Mental Health Services Administration

How to Conduct a Thorough Literature Search

A literature search (also called a literature "review") is a search of peer-reviewed literature in online databases or journals. It is used to locate research focused on a particular topic in order to get an idea of the current knowledge base on that topic.

When determining what interventions are most likely to address a community's needs, searching academic/peer-reviewed literature is often useful. For example, prevention practitioners can conduct literature searches about specific interventions or interventions that have been conducted in particular types of communities or populations. Reading about interventions that have been evaluated and published in peer-reviewed literature can help prevention practitioners gain insights into evidence-based programs and practices that match community needs.

What is "peer-reviewed" literature?

Peer-reviewed literature refers to research studies published in journals that use a peer-review approval system. Evaluators and/or researchers first submit their research findings to a journal for publication. After submission, the research is vetted for scientific merit and accuracy by relevant experts (i.e., experts in a specific discipline with advanced knowledge relevant to a specific topic area) *prior* to the study being accepted for publication. Among several lines of inquiry, peer reviewers may ask whether the study design or statistical analyses used are appropriate to the question that the study intends to answer. This process ensures that published studies are held to the highest standards of scientific integrity and accuracy. Because of the rigor involved in the peer-review process, literature searches should focus on peer-reviewed literature. To make sure the article is peer-reviewed, locate journal's information in the database you are using or the journal's website to confirm that it uses a peer-review process.

Where To Begin

1. Before you begin a search, think about the information you are trying to find and be as specific as possible. For example: *What interventions have been studied that impact the risk/protective factors we are seeking to change in a population similar to our target population?*

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- 2. Establish your search criteria by identifying the search terms you can use to find the information you need, any additional search criteria (e.g., "rural" or "2019") that might help narrow the search, and the databases you will use to locate your research articles.
 - a) Search Terms:
 - Search terms (a.k.a. keywords) should represent the main concepts of a research topic. Many databases use Boolean Logic to help conduct more efficient searches. Boolean Logic includes using quotes, operators, and parenthesis to specify your search. For a more efficient search, use Boolean Logic with "wildcards" to capture various spellings and related terms:
 - a) *Quotes:* Use quotes to search for an exact phrase if it is important for the search terms you identified to be found next to one another and not just in different parts of the same document. *Example:* "social access"
 - b) *Operators:* Include operators such as "AND", "NOT", or "OR" to refine your search:
 - *AND:* Includes two search terms. *Example:* marijuana AND prevention
 - *OR:* Broadens your search with multiple terms. *Example:* "marijuana" OR "cannabis"
 - *NOT:* Used to exclude a specific term. *Example*: marijuana NOT hemp
 - c) *Parenthesis:* You can use parenthesis to combine operators to create a more complex search. *Example*: marijuana AND (strategy OR program OR intervention)
 - d) *Wildcards:* Maximize your search results by allowing a symbol to represent one or more letters:
 - An asterisk (*) is typically used at the end of a root word. This is great when you want to search for variable endings of a root word. Example: searching for prevent* would tell the database to look for prevent, prevents, prevented, preventing, preventive, prevention, and preventative.
 - A question mark (?) can represent a single character anywhere in the word when there are variable spellings for a word and you want to search for all variants. *Example*: searching for behavio?r would return both behavior and behaviour.
 - b) Additional Search Criteria: what other search limitations will you use?
 - Language of publication, e.g. English only
 - Year of publication, e.g. 2010 onwards
 - Age group, e.g. adult/adolescent/elderly/all ages
 - Country of origin, e.g. USA, UK, or global



Be cautious about how narrow or broad the parameters of your search are. If too narrow, you might unintentionally exclude relevant studies. If too broad, you will spend an extensive amount of time wading through the literature. **However, it is better to be too broad than too narrow**!

- c) *Databases:* Peer-reviewed articles are available through various online search engines and databases. Examples: PubMed, PsychInfo, Medline, PsychArticles, SocIndex
 - Another common search utility is Google Scholar. Google Scholar is a search engine used to locate scholarly articles. Google Scholar can be helpful to search multiple sources simultaneously. To access Google Scholar, just type the following URL into your browser's window: <u>https://scholar.google.com</u>
 - a) You can use Boolean operators such as AND, OR, and quotation marks to narrow your search when using Google Scholar. Google Scholar also offers additional search parameters that might be useful in narrowing your search.
 - b) For more information about using Google Scholar (including search tips), visit the following URL: <u>https://scholar.google.com/intl/en/scholar/help.html</u>
- 3. Start your search using your identified search criteria and databases!

Troubleshooting

Use an iterative process, especially if the initial set of search terms do not yield useful results:

- If nothing comes up in your first search, expand your list of search terms to include more synonyms and start over with this updated list of search terms.
- Once you have identified some studies on an intervention that appears to be a promising fit for your needs, search just for that intervention to see if other researchers have published studies on it.
- When you find a very useful and relevant article, use it to find both older and newer articles on the intervention:
 - Look at the references cited to see if more articles on the topic can be found (check the references section to see more information about a citation) and then search for those articles.
 - Use database tools to see which newer articles have cited the article you are currently looking at!
- Learn the lingo: try to use words to describe key concepts that an expert in the field might use.
- Use fewer search terms in a single search if your results are too limited.



• Databases are usually specific to a specific field of study (e.g., public health, education). Make sure you are using databases that are appropriate for the type of intervention you are interested in.

Challenges, Caveats, and Cautions

- Track your search results by search terms and databases used. Keep a careful list of the references found with each iteration of your search.
- Many academic journals are not freely available to the public. Rather than paying for a subscription to a particular journal or purchasing a specific article, partner with a university or college faculty member or graduate student in order to gain access to journal articles. Academic faculty members or graduate students are also great resources to help think through search terms to use prior to the initial search.
- If you began your search using searchable online databases and are trying to find more information about specific interventions discovered on one or more databases, focus your search on key words for that intervention and/or the developer(s) of that intervention.

