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What is This?

Search and Ye Shall Find: Practical Literature Review Techniques for Health Educators

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Through a perusal of current published literature, health educators can locate resources for theses, dissertations, or manuscripts for scholarly publication or plan/develop health promotion programs or disease prevention interventions. Reviewing the literature, however, may be viewed as a nebulous or intimidating process. This article presents six steps intended to assist health educators to efficiently search the literature. The processes of assessing information needs, planning the search, choosing where to search, getting full-text articles, assessing the articles, and applying the evidence are outlined.

Keywords: *literature search; literature review; professional development*

Conducting thorough and effective literature searches is an essential skill set for emerging and seasoned health educators alike. This skill set is especially applicable when locating resources for theses, dissertations, or manuscripts for scholarly publication or planning/developing health promotion programs or disease prevention interventions. Becoming familiar with the available evidence, including the published scholarly literature, enables health educators to (a) learn about emerging contemporary health issues, (b) learn about seminal works and well-established health issues and determinants of health, (c) track trends and changes in the field, and (d) identify best practices for research and practice. Evidence-based public health is "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of communities and populations in the domain of health protection, disease prevention, health maintenance and improvement" (Jenicek, 1997, p. 190). To ensure successful implementation of health interventions, there should be a "focus on scientifically driven, evidence-based criteria" and on the skills to find and implement this evidence (Porter, McGrath, & Costello, 2008). As such, health educators' competencies reflect evidence-based public health skills, including the ability to

- identify diverse health-related databases,
- use computerized sources of health-related information,
- select valid sources of information about health needs and interests,
- synthesize information presented in the literature, and
- evaluate research designs, methods and findings presented in the literature (National Commission for Health Education Credentialing, 2011).

Although finding and implementing information empowers health educators, the task of searching the literature may seem daunting. Health education is unique in that it is a multidisciplinary field, defined by many fields of study (e.g., biomedical sciences, psychology, sociology, anthropology, business). Therefore, to become well versed about contemporary health issues, health educators may need to search multiple resources or try a variety of search strategies. This tool

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will describe the process for assessing your information needs, possible information sources/databases, tips for searching the literature to locate relevant and appropriate materials, resources for assistance (e.g., librarians), considerations for customizing/expanding searches, and assessing the credibility and relevance of sources (i.e., to be more efficient and to save time).

► EFFECTIVELY SEARCHING THE LITERATURE

- The amount of information available online may be overwhelming.
- Think beyond "Google"—you may use such search engines as a place to start, but if used solely you may miss important information.
- Follow these steps to create a search plan and develop search strategies that may save you time and frustration.

Step1: Assess Your Information Needs

- Formulate your question (e.g., "What health education interventions are successful for preventing teenage obesity?").
- Determine what kind of information you need. For example, do you need journal articles, government reports, policy statements, or statistics?

Step 2: Plan Your Search

- Brainstorm your search terms, considering the population, the problem, and the desired outcome (e.g., Population = teen; Problem = obesity; Outcome = prevention).
- Think of synonyms for each element of your search (e.g., Population = teen, youth, young adult; Problem = obesity, overweight, obese; Outcome = prevention, intervention, health policy, preventive measure; see Table 1).
- Use every combination of terms, using Boolean operators AND, OR, NOT (e.g., teenager OR youth OR young adult OR juvenile).
- Use truncation, adding "*" or "?" at the end of word bases to increase results (e.g., teen* gets teen, teens, teenaged, teenager, teenagers).
- Start broad and use more specific terms to narrow down the search (e.g., teen AND obesity vs. teen AND obesity AND prevention).
- Use quotation marks around phrases (e.g., "preventive measure").
- Use plus signs between terms (e.g., teen + obesity + "preventive measure").

TABLE 1
Sample Keyword Search Terms

Population	*Problem*	*Outcome*
Adolescent	Obesity	Prevention
Youth	Overweight	Risk factors
Child	Body mass index (BMI)	Protective factors
Teenager	Sedentary behavior	Intervention
Teen	Physical activity	Health policy
Middle school	Nutrition	Preventive measure
High school	Diet	
College student		
Young adult		
Juvenile		

- Narrow your search results by limiting the search results by date of publication, full-text articles, peer-reviewed articles, and so on.

Additional resources may be found in the "Cited Sources" of relevant articles identified during your search (i.e., pearling)

- Save relevant articles (may organize in a computer folder in PDF format).
- Consider using citation management software to save, collect, organize, and easily retrieve the citations using products such as Zotero (free) or Endnote and Refworks (subscription based).

Don't be discouraged if no relevant information is found. This may mean your question is unique or the information is not readily available. Consider seeking assistance from a librarian.

Step 3: Choose Resources to Search

- Think broadly and search a variety of sources, both in the literature and government/organizations' websites (i.e., those ending in .gov or .org).
- If you have access through your institution or a library, try searching general and health-related literature databases, including those that cover education, business, government/policy, and social sciences.

TABLE 2
Useful Databases for Literature Searches

Data Source	Access	Description
Agency for Healthcare Research and Quality	Free online	Includes research findings, data and survey results, and clinical guidelines; browse by population
CDC Wonder	Free online	Index to Centers for Disease Control and Prevention statistics; browse by topic, then create a specific data request by selecting demographics, etc.; creates results with table, notes, citations, and maps
CINAHL (EBSCO)	Subscription database	Searches nursing, allied health, biomedical journal and news articles; simple search interface
Google Scholar	Free online, some full-text articles require subscriptions	Searches articles, books, theses, abstracts from many disciplines
HealthyPeople.gov	Free online	Includes health objectives and implementation tools
LexisNexis	Subscription databases	Academic database (news, business, legal, medical, reference articles); Congressional records (proceedings of U.S. Congress); Government periodicals (Federal publications)
MEDLINE (Ovid)	Subscription database	Access to MEDLINE; millions of biomedical article citations
MEDLINE (PubMed)	Free online, some full-text articles require subscriptions	Access to MEDLINE from the National Library of Medicine; millions of biomedical article citations; uses MeSH (Medical Subject Headings)
NationMaster	Free online	World statistics; select category of statistics or enter subject into search box; scroll to bottom to find source
PHPartners	Free online	Links out to reputable health resources for professionals; browse public health topic pages
PsycINFO	Subscription database	Articles covering social/behavioral aspects of public health; search by keyword
Social Sciences Full Text	Subscription database	Articles covering social/behavioral aspects of public health; search by keyword
SourceOECD	Subscription database	Browse by statistical country profiles, tables, and reports
Statistic Abstracts (U.S. Census Bureau)	Free online	Comprehensive summary of statistics on U.S. social, political, and economic organization; browse by section or use search box
The Guide to Community Preventive Services	Free online	Summaries of interventions; browse by topic
Web of Science	Subscription database	Science and social science articles; search by "topic"; use the "Refine Results" limit

- If you do not have access to subscription databases, search freely available resources, such as those listed in Table 2.

Step 4: Get Full Text of Articles

- Your institution may subscribe to journals or may be able to retrieve articles for you.

- The National Network of Libraries of Medicine (NNLM) serves the public and all health professionals with biomedical information.
  - Some NNLM libraries offer literature searching and document delivery services.
  - Find the medical library for your region to learn the services provided: http://www.nlm.nih.gov/nno.

- You may order articles yourself from PubMed using a system called LoansomeDoc at https://docline .gov/loansome/login.cfm (fees may be charged per article).
- Consider contacting your local public library to see if they can get articles for you (fees may be charged).

Step 5: Assess the Literature/Article/Source for Relevance

- Is the source credible? (e.g., from an authority in the field)
- Is the topic relevant to my situation? (e.g., is the population similar to your chosen population?)
- Does this source accurately reflect current knowledge about the topic?
- Is the information recent? (e.g., preferably within the previous 2 to 3 years, unless a seminal work)
  o Place greater emphasis on recently published literature reviews that compile and synthesize existing literature surrounding the topic of interest (often including findings from older primary sources, which may now be dated).
- Does this information explain the concept I am exploring?
- Will this information provide sufficient evidence on which I can base decisions?
- For research articles:
  o Is my question answered in the "Discussion" section?
  o Do the findings of this study seem like they may be replicated (if conducted again)?
  o Read abstracts for relevant information (saves time and resources).
  o If deemed appropriate, read the "Results" section for specific findings.
  o Although you may not be proficient in statistics, attempt to interpret findings.

  o Read the "Discussion" section to determine authors' recommendations for further research.

Step 6: Apply the Evidence

- Compile your findings and synthesize the results.
  o Consider using citation management software to organize literature/articles/sources into meaningful categories based on relevant characteristics (e.g., subpopulation, geographic region, publication type).

  o Abstract literature/articles/sources to generate a database of pertinent information, including study characteristics.
  o Critically appraise the literature found, noting the strengths and weaknesses of each article/source.
  o Assess common findings, emerging and stable trends, and existing "gaps" in the research and/or practice literature.
- Evaluate how the results apply to your particular situation.
- Implement the findings into practice, then assess how well they worked.

▶ SUMMARY

- Literature searches must be thoughtful and methodical and include a variety of sources.

REFERENCES

Jenicek, M. (1997). Epidemiology, evidenced-based medicine, and evidence-based public health. *Journal of Epidemiology, 7*, 187-197.

National Commission for Health Education Credentialing. (2011). *Responsibilities and competencies of health educators.* Retrieved from http://www.nchec.org/credentialing/responsibilities/

Porter, J., McGrath, R., & Costello, A. (2008). Development of an evidence-based data skills curriculum for public health professionals. *American Journal of Health Education, 39*, 314-317.