



RESEARCH

Research Methods and Analysis

Lecture 13

Source of External Evidence

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Sources of External Evidence



- Finding the right source of information could be tricky and time consuming, therefore, it is important to think about the type of sources you need (magazines, journals, newspapers, books and etc.), and how much information you need or how much you already know about the subject area to research more appropriately. The key is to be a well-informed searcher is to use proper databases, online catalogs and even commercial research engines. Searching a library database is different from searching Google and knowing the techniques will make the work much easier and quicker.
 - Search terms to identify key concepts related to the topic.
 - Database selection consist of library catalogs for books, databases for articles.
- It is a good idea to start the search with general research and refine the research from there. For instance, if the search topic is obesity, then it is a good idea to start with a simple search for obesity and analyze the result and thinking of these possible questions:
 - How much information is available on the research topic?
 - Are there better terms that could be used?
 - Could the research topic be expanded?

Sources of External Evidence Continues...



- Almost all databases have the advanced search option that allow researchers to do a more sophisticated search by combining various concepts specifying fields such as article, title, author, publication subject and etc.
- Library databases and catalogs have subject headings that allow researchers to search by subject as well.
- Researchers may combine search terms in advanced search mood by using “and”, “or” when searching and term is referred as “Boolean operators” and it is an effective search method.
- The truncate search symbols are (*, ?, !, % and \$) and varies from database to database, and it is basically allows researcher to broaden the search to include materials on any different of languages or relationships. It depends on the database sophistication to search for all variants automatically.
- The majority of databases have limiting features that a researcher may focus on the result of scholarly or peer-reviewed articles. A researcher may limit to a particular date ranges or journals as well that allow researcher to narrow the search to a smaller list of more relevant materials.
- Too narrow or too large research topic may result with less article or journals, therefore, it is best to be flexible in the search.

Web Concerns



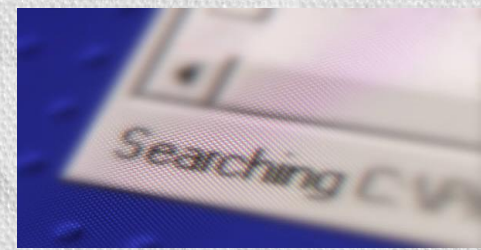
- You may use website after doing due diligence for data accuracy but it is always best to use databases that you can perform.
- Search engines may lack the sophisticated search capabilities that library catalogs and databases provide.
- The quality of information on the web is always in question and the reason is that anyone can create a webpage and put any type of information in there.
- The information may be bias or persuasive in nature that means there is a hidden agenda behind the information.
- Therefore, when using web, we should consider these issues:
 - Is the information from respect source?
 - Is the page selling some kind of product?
 - What are the author's credentials?
 - What is the reason for the creation of the page?
 - Is the information accurate?
 - Can the information be verified?
 - Are sources clearly cited?

Basic and Advanced Search



- Typically, the basic search box only searches one field, which may or may not be predetermined. The basic search is useful to determine how big the collection of articles related to the topic is, which will help in generating search strategies. It is also helpful when doing a known item search, for example when the exact title is known.
- The advanced search functions give more control to the user, and allows for a more refined search. Multiple search terms in multiple fields can be searched simultaneously. The advanced search should be used when the collection of interested articles is large and needs to be narrowed. It is also useful when information from more than one field would help in locating items of interest, such as when looking for an author with a common name, which can be narrowed by combining name with subject.

Data Bases



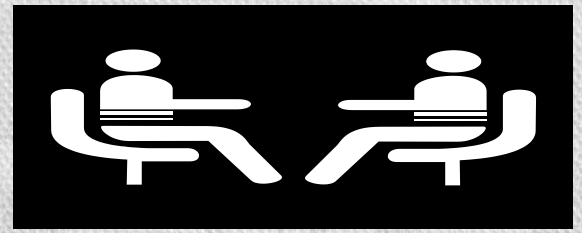
Limits

- Many databases have limits that control the available articles by specified parameters, for example, by date, format, material type, language, or location. This feature is helpful to eliminate records that are outside the selected limits, such as if only review articles are needed, or if only articles in the last five years are interest.

Controlled Vocabulary

- Many databases use controlled vocabulary. Some use Library of Congress Subject Headings (LCSH) or Medical Subject Headings (MeSH), but there are also some that create their own controlled vocabulary. It is important to note the controlled vocabulary for the database in use. This will help to refine the search and direct the search into the appropriate area.

Critical Elements



Scope and coverage:

- The journals brought to the Committee for review will contain articles predominantly on core biomedical subjects. Journals whose content is predominantly a subject peripheral or related to biomedicine are occasionally brought to the Committee when they have some biomedical content. In these cases, the Committee's advice is sought not only on the quality of the content but also on the contribution it makes to the coverage of the subjects in question. Generally, such journals will not be indexed if their biomedical content is already adequately covered.

Quality of content

- Scientific merit of a journal's content is the primary consideration in selecting journals for indexing. The validity, importance, originality, and contribution to the coverage of the field of the overall contents of each title are the key factors considered in recommending a title for indexing, whatever the intended purpose and audience.

Quality of editorial work

- The journal should demonstrate features that contribute to the objectivity, credibility, and quality of its contents. These features may include information about the methods of selecting articles, especially on the explicit process of external peer review; statements indicating adherence to ethical guidelines; evidence that authors have disclosed financial conflicts of interest; timely correction of errata; explicit responsible retractions as appropriate; and opportunity for comments and dissenting opinion. Neither the advertising content nor commercial sponsorship should raise questions about the objectivity of the published material. Sponsorship by national or international professional societies may be considered.

Place of Publication

- The highest quality and most useful journals are selected without regard for place of publication. In order to provide broad international coverage, special attention is given to research, public health, epidemiology, standards of health care, and indigenous diseases. Journals will generally not be selected for indexing if the contents are subjects already well represented in MEDLINE or that are being published for a local audience.
- Criteria for selection are the same as for those written in English. In order to extend the accessibility of the journal's content to a wider potential readership, the majority of published articles in the review issues must contain an English-language abstract before the title will be considered for possible indexing.

Types of Journals

Interpretation of these criteria will be influenced by the stated purpose of the journal. For purposes of illustration, four broad categories of journals are suggested:

- **Research journals** are predominantly devoted to reporting original investigations in the biomedical and health sciences, including research in the basic sciences; clinical trials of therapeutic agents; effectiveness of diagnostic or therapeutic techniques; or studies relating to the behavioral, epidemiological, or educational aspects of medicine.
- **Clinical or practice journals** have as their dominant purpose documenting the state of current practice, providing background for those in training, or the continuing education of practitioners. This is done through the publication of case reports, discussions and illustrations of new techniques, evaluations of current practices, and commentaries.
- **Review journals** contain the current state of knowledge or practice, integrating recent advances with accepted principles and practice, or summarizing and analyzing the consensus view of controversial issues in knowledge or practice. Review journals provide background information for practitioners and researchers, students and house officers, and others who wish an overview on the current status of a field.
- **General or all-purpose journals** contain elements of all the foregoing and frequently contain commentary and analysis of important social, political, and economic issues. They are usually designed for a broad audience and not limited to a specialty.

Example of Research Databases

MEDLINE®

- Contains journal citations and abstracts for biomedical literature from around the world and provides free access and links to full text articles when possible. MEDLINE, the principal online bibliographic citation database of NLM's MEDLARS® system, is used internationally to provide access to the world's biomedical journal literature. About 5,000 titles are indexed and included in the MEDLINE database. The LSTRC meets three times a year and considers approximately 140 titles at each meeting. The world-wide users are researchers, health care practitioners, educators, administrators, and students whose needs vary considerably. The content, format, and accepted structure of the journals, designed to meet the needs of these users, also vary greatly.

Examples of Research Databases Continues...

Cochrane Reviews

- Are the primary research in human health care and health policy, and are internationally recognized as the highest standard in evidence-based health care. They investigate the effects of interventions for prevention, treatment and rehabilitation. They also assess the accuracy of diagnostic test for a given condition in a specific patient group and setting. The online library is [The Cochrane Library](#).

EBSCO

- Created by the U.S. National Library of Medicine, *MEDLINE* is an authoritative bibliographic database that contains citations and abstracts for biomedical and health journals used by health care professionals, nurses, clinicians and researchers engaged in clinical care, public health and health policy development.

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