Unit 3
Literature Search
Learning Objectives

After studying this unit, you should be able to understand:

✓ What is literature?
✓ How can we search of existing literature?
✓ Where can we do literature survey?
✓ What is meant by literature review?
✓ How to review literature selected?
✓ Steps of literature review
✓ Collection of useful information
✓ Many more ............................................
What is Literature?

Latin word- Litteratura (Late 14th Century)
Means Learning, Writing Originally- Littera: Letter
Meaning- “Literary production or work”

An extensive search of the information available on a topic which results in a list of references to books, periodicals, database and other materials on the topic.
Literature Search

It is a systematic and well-organised search from the already published data to identify a breadth of good quality references on a specific topic.

The main purpose of a thorough literature search is to formulate a research problem by evaluating the available literature with an eye on gaps still amenable to further research.

✧ Research problem is a topic of interest and of some familiarity to the researcher.
Effective literature searching is a crucial stage in the process of writing a literature review.

It helps to identify if the research question has previously been explored.

It uncovers all relevant knowledge and research methods related to the research question.

Acquiring the skills of synthesis and critical analysis of published literature is needed.
Literature Review

- Literature review is going into the depth of the literature searched.

- It is a process of re-examining, evaluating or assessing the short-listed literature.

- Review of literature gives a clarity & better understanding of the research/project.
Four Correct order steps of Literature Review:

1. Using the library
2. Identifying relevant sources
3. Locating research sources
4. Summarizing the research literature
Formulating a research question

- One should consider a criteria called **FINER**
  - **F** – Feasible
  - **I** – Interesting
  - **N** – Novel
  - **E** – Ethical
  - **R** - Relevant
Process of Literature Search
Literature (Resources)

- Books (printed or e-books)
- Journals (printed or e-books)
- Research reports (both)
- Institutional publications (both)
- Govt. publications (both)
- Various NGO’s/ INGO’s publications
- Internet (Online resources)
- Intranet (Offline resources)
Sources of Information (Types)

- By nature/content of information-
  1. Primary literature
  2. Secondary literature
  3. Tertiary literature

- By format/media/channel
  a. Hard copy (Print)
  b. Soft copy (Electronic)
Primary literature

- Primary sources are the authentic publication of an expert's new evidence, conclusions and proposals (case reports, clinical trials, etc).

- It usually published in a peer-reviewed journal.

- Preliminary reports, congress papers and preprints also constitute primary literature.
**Secondary literature**

Secondary sources are systematic review articles or meta-analyses where material derived from primary source literature are inferred and evaluated.

**Tertiary literature**

It consists of collections that compile information from primary or secondary literature (e.g., reference books).
How can we search?

A. Printed

B. Electronic
   (a) Offline (Intranet) e.g. DVD, CD, cassette
   (b) Online (Internet)

Types A and B(a) can be access in Library.
Online searching

- Internet searching for the purpose of academic, business and others.

- Pubmed (Databases) searching exclusively for medical literature
Purposes

1. Review theory
2. Problem statement
3. To improve self knowledge
4. To Know methodology.
5. To assess need of problem
6. To support on tools, methods, findings, data collection
7. To review what was done in past
8. To generate Idea
Sources

Dissertations
Thesis
Research Reports
Original Research
Articles published in Journals

Books
Periodicals
Graduate studies
Databases
Indexes
Abstracts
Other
Use of the Internet (web searching) and it’s technologies
Online searching

- Internet searching for the purpose of academic, research, business and others.

- Pubmed (Databases) searching exclusively for medical literature
Searching contd..

- We should know the techniques-
  - to access to relevant information,
  - to get the recall (unwanted) less and precise (relevant) information more, and

- familiar with various techniques that the Search engine such as Google, Yahoo, Altavista, pubmed etc. used.
www.whosea.org
HINARI= www.healthinternetwork.org
Blackwell Publishing= www.blackwell-synergy.com
Oxford University press= www3.oup.co.uk/jnls
Directory of free online Journal= www.doaj.org
<table>
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<th>Resource</th>
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<td>Search engines</td>
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<td>Google</td>
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<td>Yahoo</td>
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<td>Electronic source of database</td>
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<td>Medline (Medical Literature Analysis</td>
<td><a href="https://www.nlm.nih.gov">https://www.nlm.nih.gov</a></td>
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<td>and Retrieval System Online)</td>
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<td>CINAHL (The Cumulative Index to Nursing</td>
<td><a href="https://www.cinahl.com">https://www.cinahl.com</a></td>
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<td>and Allied Health)</td>
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<tr>
<td>Embase (Excerpta Medica Database)</td>
<td><a href="https://store.elsevier.com/embase">https://store.elsevier.com/embase</a></td>
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<td>SCOPUS</td>
<td><a href="https://www.scopus.com/">https://www.scopus.com/</a></td>
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<td>Ind Med: Indian Database</td>
<td><a href="https://www.medind.nic.in">https://www.medind.nic.in</a></td>
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<td>ERIC</td>
<td><a href="https://www.eric.ed.gov">https://www.eric.ed.gov</a></td>
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<td>ProQuest</td>
<td><a href="http://proquest.com">http://proquest.com</a></td>
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<td>The Cochrane Database of Systematic Reviews</td>
<td><a href="http://www.cochranelibrary.com/">http://www.cochranelibrary.com/</a></td>
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<td>The ACP Journal Club</td>
<td><a href="http://search.ebscohost.com/">http://search.ebscohost.com/</a></td>
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<td><a href="http://www.dartmouth.edu/~library/biomed/resources/ejournals.html">http://www.dartmouth.edu/~library/biomed/resources/ejournals.html</a></td>
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<td><a href="http://plus.mcmaster.ca/evidenceupdates/">http://plus.mcmaster.ca/evidenceupdates/</a></td>
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<td>e Medicine</td>
<td><a href="http://emedicine.medscape.com/">http://emedicine.medscape.com/</a></td>
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<td>National Guideline Clearinghouse</td>
<td><a href="http://www.guideline.gov/">http://www.guideline.gov/</a></td>
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<td><a href="http://www.dartmouth.edu/~library/biomed/resources/ovid.html">http://www.dartmouth.edu/~library/biomed/resources/ovid.html</a></td>
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<tr>
<td>TRIP (Turning Research into Practice) Database Plus</td>
<td><a href="https://www.tripdatabase.com/">https://www.tripdatabase.com/</a></td>
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<td>UpToDate</td>
<td><a href="http://www.uptodate.com/online">http://www.uptodate.com/online</a></td>
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Key databases related to Agri sciences

- Acta Horticulture
- Agricola
- GeoBase
- Informit
- OECD iLibrary
- Scopus
- SciFinder Web
- Sci-hub
- Web of Science

- AGRIS
  (AGRIcultural Sciences)
- CAB abstract
- CARIS (current agricultural research information system)
SHODHGANGA

The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access at http://shodhganga.inflibnet.ac.in
Education resources Information Centre (ERIC) is a free online digital library of education research and information sponsored by the institute of education sciences of the U.S. Department of Education available at http://eric.ed.gov/
Search Techniques-contd..

- Use of Boolean operators
  AND, OR, NOT
- Use Truncation
  e.g. epidem*
- Nested searching
  e.g. history AND (war or peace)
  e.g. (swine OR H1N1) AND (flu OR influenza OR virus OR pandemic)
Boolean operators

- **AND**- retrieves only records containing both terms.
  Result: War AND peace

- **OR**- retrieves records containing either one or more terms;
  Result: war, peace, both

- **NOT**- exclude records containing the second term
  Result: War only
Tip 1: Quotation marks

This is most useful when the words to be searched are not very specific, have different meanings in various subject areas, or when it is important that the same word is repeated.

E.g. “global warming”
“head and neck cancers”
Searching tips contd..

Tip 2: Limit by site
This is useful when you want to control the quality of the search results, when you know a site that is likely to have what you need, and also when you want to find again a known document.

e.g. site: edu “global warming”

Tip 3: Limit by file type
Especially useful when you have reason to suspect that the answer you need will be in a certain format.

e.g. file type: ppt site: edu “global warming”
Some other tips:

- Specify your search terms
- Use professional terms
- Use the keywords from standard tools- SLSH, LCSH, MeSH and others
- Use lowercase letters
- Ignore preposition, article and other stop words
- Read the searching guideline of the particular databases
How to Search, Display, Save the results

www.ncbi.nlm.nih.gov/pubmed
Searching PubMed (MEDLINE)
- Search PubMed for an Author
- Searching PubMed by Author and Subject
- PubMed Simple Subject Search
- Search for a Journal

MeSH (Medical Subject Headings) Database
- Searching with the MeSH Database
- Combining MeSH Terms
- Applying Subheadings and other features of the MeSH Database

Managing results

Pubmed cont..
Results: 6

1. **Substance-Related Disorders**
   Disorders related to substance abuse, the side effects of a medication, or toxin exposure.
   Year introduced: 1998(1963)

2. **National Institute on Drug Abuse (U.S.)**
   Component of the NATIONAL INSTITUTES OF HEALTH. It supports a comprehensive research portfolio that focuses on the biological, social, behavioral, and neuroscientific bases of drug abuse on the body and brain as well as its causes, prevention, and treatment. NIDA, NIAAA, and NIMH were created as coequal institutes within the Alcohol, Drug Abuse and Mental Health Administration in 1974. It was established within the NATIONAL INSTITUTES OF HEALTH in 1992.
Results: 1 to 20 of 2256

   Lawton L.
   PMID: 23311282 [PubMed - indexed for MEDLINE]
   Related citations

2. The effects of cannabis on mental health.
   Shrub R.
Search for journal

Enter title of the Journal, ISSN or Journal Abbreviation to get all the citation for that journal.
There are multiple ways to search for a journal in PubMed. For this example, we will use the Advanced search page.
Format for Citing References


**Book by a single author**
Format for Citing References


**Book by more than one author**

Format for Citing References

**Journal Article**


Format for Citing References

Referencing Electronic Sources

Author, A. (year, month day). Title of article. *Title of Newspaper.* Retrieved from home page web address

Recommendations

1. Not one database can search all the research literature.
2. There is a need to search several different databases or online resources.
3. When searching topic of interest, emphasis should be given to meta-analysis, systematic reviews, landmark studies, etc.
Thank you