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INFORMATION

Searching for Health Promotion and Public Health Studies

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Background

The inclusion of an unbiased sample of relevant studies is central to the validity of systematic reviews. Time-consuming and costly literature searches, which cover the grey literature and all relevant languages and databases, are normally recommended to prevent reporting biases (Egger 2003).

In general, finding studies on public health and health promotion topics is much more complicated than retrieving medical studies due to literature being widely scattered (Peersman 2001). The multi-disciplinary nature of health promotion and public health result in studies being found in very diverse journals and therefore indexed in a wide range of electronic databases (Beahler 2000, Grayson 2003). The search process becomes time-consuming as search strategies need to be adapted for each database. Difficulties also arise because terminology is imprecise and constantly changing (Grayson 2003). Broad health promotion and public health questions often result in a large volume of citations to apply the inclusion and exclusion criteria. In addition, reviewers often wish to find all types of evidence from a variety of study designs, further increasing the volume of literature to trawl through. A great deal of the evidence for many health promotion and public health topics is also found in the grey literature. In a review of crime prevention interventions the authors identified more than fifty percent of the included studies from grey literature (Casteel 2000).

Therefore, searching for public health and health promotion literature can be a very complex and time-consuming task, requiring the use retrieval methods other than database searching to retrieve studies.

1. Electronic databases

You will need to search a number of electronic databases which cover the range of disciplines relevant to your question; it is also important to remember to supplement electronic searching with other searching methods described in this document. **Electronic searching should never be the only method used to search for evidence.** For example, studies of nutrition school-based interventions may be found in general health promotion journals, education journals, nutrition journals, biomedical journals and even psychological journals.

A list of over 160 public health-related databases is available at <http://library.umassmed.edu/ebpph/dblist.cfm>. Seventy three databases from this list are available freely on the internet – these databases are listed on the page of Free Public Health Databases.

Due to the delay between publication of a journal and its appearance on an electronic database it is important to check the content pages of recent journal publications to ensure your search is up-to-date.

Key public health databases: (Please visit <http://library.umassmed.edu/ebpph/dblist.cfm> for a more extensive list of databases)

Psychology:

- PsycINFO/PsycLIT

Biomedical:

- CINAHL
- LILACS (Latin American Caribbean Health Sciences Literature) <http://www.bireme.br/bvs/l/ibd.htm>,
- Medline
- EMBASE
- Cochrane Controlled Trials Register (CENTRAL) – available through The Cochrane Library
- Combined Health Information Database (CHID) <http://chid.nih.gov/>,
- Chronic Disease Prevention Database (CDP) <http://www.cdc.gov/cdp/>

Sociology:

- Sociofile
- Sociological Abstracts
- Social Science Citation Index (citation searching)
- Social Policy and Practice

Education:

- ERIC (Educational Resources Information Center)
- C2-SPECTR (Campbell Collaboration Social, Psychological, Educational and Criminological Trials Register) <http://www.campbellcollaboration.org>
- REEL (Research Evidence in Education Library, EPPI-Centre) <http://eppi.ioe.ac.uk>

Transport:

- NTIS (National Technical Information Service)

- TRIS (Transport Research Information Service) <http://ntl.bts.gov/tris>
- IRRD (International Road Research Documentation)
- TRANSDOC (from ECMT (European Conference of Ministers of Transport))

Physical activity:

- SportsDiscus

General health promotion and public health:

- BiblioMap (EPPI-Centre) <http://eppi.ioe.ac.uk>
- HealthPromis (HDA, UK) <http://www.hda-online.org.uk/evidence/>,
- Global Health

Other:

- Popline (population health, family planning) <http://db.jhuccp.org/popinform/basic.html>,
- Enviroline (environmental health) – available on Dialog, Toxfile (toxicology) – available on Dialog,
- Econlit (economics)

Qualitative:

- ESRC Qualitative Data Archival Resource Centre (QUALIDATA) (<http://www.qualidata.essex.ac.uk>),
- Database of Interviews on Patient Experience (DIPEX) (<http://www.dipex.org>).

2. Components of the database searching process

Subject headings /descriptors (eg. MeSH headings in Medline)

Subject headings are used in different databases to describe the subject of each journal article indexed in the database. For example, MeSH (Medical Subject Headings) are used within the Medline database; there are more than 22,000 terms used to describe studies and the headings are updated annually to reflect changes in medicine and medical terminology.

Examples of subject headings relevant to health promotion and public health:

Mass media, smoking, adolescent, health promotion, health education, students, sports

It is important to remember that each database will have different controlled vocabulary (subject headings) so you will need to adapt your search strategy for each database. Each source/database needs its own search strategy.

Subject headings are assigned by human beings, so mistakes can be made. For example, the mass media article used as an example in this section was not assigned with the mass media subject heading in the PsycINFO database. Therefore, search strategies should always include textwords in addition to subject headings.

Different databases often use different syntax to retrieve records (eg. \$ or * may be used in different databases or interfaces). Therefore, you will need to become well-acquainted with the idiosyncrasies of each database.

For many health promotion topics there may be few subject headings available (eg. community-based interventions). Therefore, some search strategies may comprise mainly of textwords.

Textwords

These are words that are used in the abstract of articles (and title) to assist with finding the relevant literature. Textwords in a search strategy always end in .tw (eg. adolescent.tw will find the word adolescent in the abstract and title of the article). A general rule is to duplicate all subject headings as textwords, and add any other words which may also describe the component of the PICO question.

- Truncation \$ - this picks up various forms of a textword.

Eg. teen\$ will pick up teenage, teenagers, teens, teen

Eg. Smok\$ will pick up smoke, smoking, smokes, smoker, smokers

- Wildcards ? and #

These syntax commands will pick up different spellings.

? will substitute for one or no characters, so is useful for locating US and English spellings

Eg. colo?r.tw will pick up color and colour

will substitute for one character so is useful for picking up plural or singular versions of words

Eg. wom#n will pick up women and woman

- Adjacent ADJn

This command retrieves two or more query terms within n words of each other, and in any order. This syntax is important when the correct phraseology is unknown.

Eg. sport ADJ1 policy will pick up sport policy and policy for sport

Eg. mental ADJ2 health will pick up mental health and mental and physical health

Using Boolean operators

When combining each element of your PICO question you will need to use the Boolean operators – AND, OR.

When combining synonyms, eg all subject headings and textwords to describe the population (eg. adolescents) you will need to use the OR command.

When combining different elements eg. population and intervention terms, you will need to use the AND command. This will ensure you only find studies that describe the population of interest and the intervention of interest.

P - Population

Subject headings OR Textwords

I – Intervention

Subject headings OR Textwords

C – Comparison (if necessary)

Subject headings OR Textwords

O – Outcome

Subject headings OR Textwords

T – Type of study (if necessary)

Subject headings

Use a validated filter

OR

Textwords

To find studies using all of the PICO elements

P AND I AND C AND O (AND T)

It is usually not recommended to include the O (outcome) of the PICO question in the search strategy because outcomes are described in many different ways and may not be described in the abstract of the article. Search terms to describe outcomes should only be used (with caution) if the number of citations is too large to apply the inclusion and exclusion criteria.

Pilot the search strategy first – complete a scoping search on a database most likely to yield studies using a sample of keywords to locate a few relevant studies. Check the subject headings that are used to index the studies and the relevant textwords in the abstract of the citation. Also, it may be useful to find the citations of key articles in PubMed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>) and click on Related Articles to find other relevant studies in order to determine additional relevant subject headings and textwords.

The search strategy developed to identify studies will not search the entire full-text of the article. The following complete reference for the citation demonstrates the information that is available for each citation (example provided using the OVID interface): therefore searching the subject headings and textwords in the abstract will help us to find this study. Always use a combination of subject headings and textwords for each PICO element.

Unique Identifier

2014859

Record Owner

NLM

Authors

Bauman KE. LaPrelle J. Brown JD. Koch GG. Padgett CA.

Institution

Department of Health Behavior and Health Education, School of Public Health, University of North Carolina, Chapel Hill 27599-7400.

Title

The influence of three mass media campaigns on variables related to adolescent cigarette smoking: results of a field experiment.

Source

American Journal of Public Health. 81(5):597-604, 1991 May.

Abbreviated Source

Am J Public Health. 81(5):597-604, 1991 May.

Publication Notes

The publication year is for the print issue of this journal.

NLM Journal Code

1254074, 3xw

Journal Subset

AIM, IM
Local Messages
Held at RCH: 1985 onwards, Some years online fulltext - link from library journal list
Country of Publication
United States

MeSH Subject Headings

Adolescent

***Adolescent Behavior**

Child

***Health Education / mt [Methods]**

Human

***Mass Media**

Pamphlets

Peer Group

Radio

Regression Analysis

***Smoking / pc [Prevention & Control]**

Southeastern United States

Support, U.S. Gov't, P.H.S.

Television

Abstract

Subject headings /
index terms

Text words in abstract eg. mass
media, adolescents, cigarette

BACKGROUN: This paper reports findings from a field experiment that evaluated mass media campaigns designed to prevent cigarette smoking by adolescents. METHODS: The campaigns featured radio and television messages on expected consequences of smoking and a component to stimulate personal encouragement of peers not to smoke. Six Standard Metropolitan Statistical Areas in the Southeast United States received campaigns and four served as controls. Adolescents and mothers provided pretest and posttest data in their homes. RESULTS AND CONCLUSIONS: The radio campaign had a modest influence on the expected consequences of smoking and friend approval of smoking, the more expensive campaigns involving television were not more effective than those with radio alone, the peer-involvement component was not effective, and any potential smoking effects could not be detected.

ISSN

0090-0036

Publication Type

Journal Article.

Grant Number

CA38392 (NCI)

Language

English

Entry Date

19910516

Revision Date

20021101

Update Date

20031209

3. Search strategies

Each database you choose to search may require different syntax to be used to search for studies. Remember to become familiar with each database before you begin.

Use text words freely as there may be few subject headings related to your topic.

Allocate sufficient time (may take up to five days) to develop, test and re-test the search strategy to make sure it captures relevant studies.

Use a skilled librarian to assist with search strategies, databases and relevant journals, where available. Ask your colleagues for synonyms of each element of your PICO question.

3.1 Applying study design filters

You may or may not wish to apply a study design filter to your search strategy. A search strategy without a filter is likely to result in more work at the inclusion/exclusion stage of the review. However, the search will be more sensitive to identifying relevant studies.

Using study design to limit search

RCTs: If you wish to only locate evidence from RCTs then a study design filter can be added to the search strategy. The Cochrane Reviewer's Handbook (Clarke 2003) details the appropriate filter to add.

Non-RCTs: Limiting the search strategy by using non-randomised study terms can be very problematic, and is generally not recommended. This is because:

- Few studies may be indexed by study design
- The vocabulary required to identify different study designs can vary extensively between electronic databases. Terms vary from 'control groups' to 'follow-up studies', to 'longitudinal studies' or even 'program effectiveness' or 'program evaluation', to index the same studies
- Some databases, eg. PsycINFO, are poorly indexed with respect to methodology.
- Therefore, after a PICO search is completed all citations will require application of the inclusion and exclusion criteria.

Qualitative research: A filter for the CINAHL database is available from the Edward Miner Library

http://www.urmc.rochester.edu/hslt/miner/digital_library/tip_sheets/Cinahl_eb_filters.pdf

4. Handsearching

Core public health and health promotion journals

It may be useful to handsearch specialist journals relevant to the review topic area to identify further primary research studies. Also consider non-health promotion and public health journals which may cover the topic of interest, i.e., marketing journals, etc.

Two lists of health promotion and public health journals have been produced which may help to determine which journals to search.

- The Lamar Soutter Library list of public health journals, <http://library.umassmed.edu/ebpph/>, (a list of freely available journals is also included)
- The Core Public Health Journals List compiled by Yale University, <http://www.med.yale.edu/eph/library/phjournals/>,

The Effective Public Health Practice Project (Canada) has found that the most productive journals to handsearch to locate public health and health promotion articles are: American Journal of Health Promotion, American Journal of Preventive Medicine, American Journal of Public Health, Canadian Journal of Public Health, BMJ. Other useful journals include Annual Review of Public Health, Health Education and Behavior (formerly Health Education Quarterly), Health Education Research, JAMA, Preventive Medicine, Public Health Reports, Social Science and Medicine.

5. Locating grey literature

Grey literature has been defined as “that which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers” (Farace 2000).

Types of grey literature

- Theses and dissertations
- Census, economic and other data sources
- Databases of ongoing research
- Electronic networks
- Information communications (telephone conversations, meetings, etc)
- Conference proceedings and abstracts
- Newsletters
- Research reports (completed and uncompleted)
- Technical reports
- Translations

(From: Helmer D. Etext on Health Technology Assessment (HTA) Information Resources. Chapter 10: Grey Literature, <http://www.nlm.nih.gov/nichsr/ehta/chapter10.html>).

- 1) Theses, dissertations and meeting abstracts
 - Networked Digital Library of Theses and Dissertations (NDLTD) - <http://www.ndltd.org/>
 - Proquest dissertation abstracts <http://wwwlib.umi.com/dissertations/gateway>
 - Web of Knowledge (subscription only) - <http://www.isiwebofknowledge.com/index.html>
- 2) Grey literature databases (Adapted from: Helmer D. Etext on Health Technology Assessment (HTA) Information Resources, Chapter 10: Grey Literature)
 - BIREME Databases - <http://www.bireme.br/bvs/I/ihome.htm>
 - CoGPrints e-archive - <http://cogprints.org/>
 - CRISP database - <http://crisp.cit.nih.gov/>

- DARE (Database of Abstracts of Reviews of Effects) – www.cochranelibrary.com
- DIMDI databases - <http://www.dimdi.de/dynamic/en/index.html>
- DIRLINE - <http://dirline.nlm.nih.gov/> - to find lists of organisations related to a particular field, eg obesity
- Directory Database of Research (JAPAN) - <http://read.jst.go.jp/EN/>
- ERIC database - <http://www.eric.ed.gov/>
- GrayLit Network - <http://www.osti.gov/graylit/>
- HSRProj - http://wwwcf.nlm.nih.gov/hsr_project/home_proj.cfm - Health Services Research Projects
- HSTAT - <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat> Health Services and Technology Assessment Texts -
- HTA Database – www.cochranelibrary.com
- Microlog (Subscription Only) - <http://www.micromedia.on.ca/>
- National Research Register (UK) - <http://www.update-software.com/national/>
- Netprints (BMJ) - <http://clinmed.netprints.org/home.dtl>
- Networked Digital Library of Theses - <http://www.ndltd.org/>
- SIGLE (System for Information on Grey Literature in Europe)(Subscription only) - <http://www.fiz-informationsdienste.de/en/DB/sigle/>
- WorldCat (subscription only) - <http://www.oclc.org/worldcat/>
- HealthPromis, the public health database for England through the Health Development Agency, <http://www.hda-online.org.uk>
- National Recreation Database (Canada) - <http://www.lin.ca>
- National Sport Information Centre – SportScan, <http://www.ausport.gov.au/nsic/sportscan>
- National Sport Information Centre - NSIC full text archive, <http://www.ausport.gov.au/fulltext/default.asp>
- SportLit, South African Sports Commission database - <http://www.sasc.org.za/Library.asp>

3) Web Catalogues

- AMICUS (National Library of Canada) - <http://amicus.collectionscanada.ca/aaweb/aalogine.htm>
- Australian National Library catalog - <http://catalogue.nla.gov.au/cgi-bin/Pwebrecon.cgi?DB=local&PAGE=First>
- British Library - <http://www.bl.uk/>
- National Library of Medicine's LocatorPlus - <http://locatorplus.gov/>
- National Technical Information Services catalog - <http://www.ntis.gov/search/index.asp?loc=3-0-0>
- Canadian Institute of Scientific and Technical Information(CISTI) - <http://cat.cisti-icist.nrc-cnrc.gc.ca/search>

4) Scanning reference lists of relevant studies

You should scan the reference lists of studies you find that meet are relevant to your question. The reference lists may contain additional studies. You can also use the Social Science Citation Index database to find studies cited by relevant studies.

5) Contacting authors/academic institutions of key studies

This method is particularly useful when you are aware of the key authors in the field you are investigating. Key authors are likely to be aware of other studies in their field.

6) Email listservs

It may be useful to post a message to relevant email lists. Examples include the Equity List - <http://listserv.paho.org/Archives/equidad.html>, Evidence-based-health - EVIDENCE-BASED-HEALTH@JISCMail.AC.UK, public health - PUBLIC-HEALTH@JISCMail.AC.UK, or other lists particular to your topic. You can find a list of relevant email lists at <http://www.jiscmail.ac.uk/>.

7) Internet searching

The internet is useful to find:

- government reports (which may contain relevant studies or references to them);
- reports produced at the health promotion service provision level;
- reports produced by professional association websites – Public Health Associations, Health Promotion Associations; and
- reports produced by non-governmental organisations, for example Heart Foundations, Cancer Societies, etc.

You will need to find the web addresses for such organisations.

The internet search engine Google Scholar (<http://scholar.google.com>) may be a useful search engine to locate relevant research studies.

6. Save, document and export the search

Always save and print out the search strategy for safe record-keeping. It is essential to have bibliographic software (Endnote, Reference Manager, GetARef) to export the retrieved citations to apply the inclusion/exclusion criteria. Citations from unpublished literature usually cannot be exported so will require individual entry by hand into the reference managing system. Bibliographic software will also assist with the referencing when writing the final review.

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