Doing a Literature Review

Topics Covered in This Chapter

- What is a literature review?
- Types of literature review
- Getting to grips with technology
- Preliminary thinking and scoping your review
- Using electronic search engines and databases
- Using key words in electronic searches
- Widening the literature search
- Storing your search results
- Getting hold of publications
- Critically appraising the literature
- Writing and organising your review

This chapter describes the steps involved in preparing a literature review, from initial searching through to final report writing. While the chapter is mainly written for people who are setting out to do a literature review for the first time, researchers with some experience of preparing literature reviews may also find the guidelines helpful.

What Is a Literature Review?

A literature review is a systematic study of existing research and other published information on a specific topic. Literature reviews can be used to:

- identify key information relevant to a topic
- assess the status or quality of existing research
- critically examine support for alternative theories or arguments
- evaluate research methods used in previous studies.

When planning a new research project, such as a thesis or dissertation, a literature review can be used to:

- identify possible research topics to focus on
- find out what is already known about a topic
- highlight questions or issues that need further study
- select suitable research methods to use in a project.

Literature reviews can also be used to assist the formulation or evaluation of policies, programmes or services by:

- updating basic knowledge
- reviewing research assessing the effectiveness of specific applications or interventions
- identifying best practice principles.

Doing a literature review usually involves four main steps:
• developing and refining the topic and scope of the literature to be reviewed
• searching for and retrieving copies of relevant research material
• reading through the studies located and assessing them
• writing a report summarising the key information found.

Often these steps will overlap. In most reviews, several rounds of searching, reading and writing may be needed before a review is complete.

Types of Literature Review

Literature reviews can be long or short, cover a wide or narrow range of studies and be aimed at a broad or specialised audience. Two general types of literature review are summarised in Table 7.1. These are:

Table 7.1 COMMON TYPES OF LITERATURE REVIEWS

<table>
<thead>
<tr>
<th>General, conceptual literature review</th>
<th>Systematic review</th>
</tr>
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<tbody>
<tr>
<td><strong>Length of review</strong></td>
<td><strong>Brief review</strong></td>
</tr>
<tr>
<td><strong>Format for the review report</strong></td>
<td><strong>Introduction section for a journal article, research proposal or funding application</strong></td>
</tr>
<tr>
<td><strong>Purposes</strong></td>
<td><strong>Justification of how the research project addresses a topic needing further research</strong></td>
</tr>
<tr>
<td><strong>Analytic strategy</strong></td>
<td><strong>Concise focus leading to research questions or hypotheses</strong></td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td><strong>Primarily research studies that are pivotal or central to the proposed research</strong></td>
</tr>
<tr>
<td><strong>Focus on design and methods in studies reviewed</strong></td>
<td><strong>Both topics and methods are usually relevant</strong></td>
</tr>
<tr>
<td><strong>Outcomes highlighted in review</strong></td>
<td><strong>Identifies key questions needing further investigation</strong></td>
</tr>
<tr>
<td><strong>Potential audiences</strong></td>
<td><strong>Specialist researchers, thesis examiners</strong></td>
</tr>
</tbody>
</table>

RCT = randomised controlled trial

• a general or conceptual literature review (which may be brief or extended)
• a systematic review that provides evidence regarding best practice.

A general extended literature review for a technical report, or a thesis or dissertation, is likely to be about 15–30 pages long. It will usually be included as a separate chapter in the report or thesis. Normally the review will provide a conceptual overview of the research topic, be organised into several sub-topics or themes and include a discussion of how research in the area has developed over time. A conceptual overview is a framework or organising structure that helps make sense of the multiple topics included in the review. A thesis literature review needs to demonstrate knowledge about the key features of the research topic, and assess the strengths and weaknesses of the various research studies on the topic.

The review should note the types of research reported and identify any gaps in the research. Sometimes the review of research methods related to a thesis topic may be written as a separate chapter. Shows an example of a general, conceptual review.

Box 7.1 Example of a General Conceptual Literature Review

**Outsourcing and the Changing Nature of Work (Davis-Blake & Broschak, 2009)**

This sociology review, published as a journal article, is 20 pages in length. It defines outsourcing and describes the key features of outsourcing arrangements likely to affect the nature of work. The primary purpose of the article is to review and organise the growing but fragmented body of research that suggests that outsourcing is indeed associated with important changes in the design and functioning of jobs, work groups, internal labor markets, and
A brief conceptual **literature review**, such as one included in the introduction to a research proposal, funding application or research report (e.g., manuscript for a research journal) is typically about 3–5 pages long and aims to provide a context and justification for the research proposed or reported. The review needs to be brief for space reasons, as funding agencies and journal editors often strictly limit the number of words or pages allowed in a research proposal or manuscript. The review should focus only on the most relevant literature and be clearly linked to the aims and objectives of the research being proposed or reported.

A systematic review is a special type of **literature review** that aims to provide a synthesis of the main trends or findings in a carefully selected group of studies on a topic, using procedures intended to limit bias and random error (see Cooper, 2009). Selection of research reports for inclusion in a systematic review involves assessing the quality of each study and its research methodology according to specified criteria such as: (a) the type of research design used, (b) the population or sample used in the study, (c) the type of intervention (or group differences) reported and (d) the outcomes from the study. Many systematic reviews include only quantitative studies and often limit inclusion to only those using randomised controlled trials or experimental studies. A meta-analysis is a type of systematic review that combines the statistical results from several studies to produce an overall summary estimate. Outlines an example of a meta-analytic review that has used a systematic review approach. Further information about systematic reviews in health care interventions is available from the Cochrane Collaboration (http://www.cochrane.org.ezproxy.aut.ac.nz).

### Box 7.2 Example of a Meta-Analytic Review

**Perceived Discrimination and Health** (Pascoe & Richman, 2009)

This review tested the hypothesis that perceived discrimination is significantly related to mental and physical health outcomes. The review used a meta-analysis and research synthesis to examine the relationship between perceived discrimination and several health outcomes. The most common forms of discrimination covered are racial or ethnic discrimination (examined in 65 per cent of research articles covered by the review) and gender discrimination (14 per cent of articles). The meta-analysis identified the ways perceived discrimination can affect health, such as through psychological and physiological stress responses and health behaviours. The review concludes that perceived discrimination has a significant negative effect on both mental and physical health and leads to heightened stress responses and participation in unhealthy behaviours.

The review is based on a Masters thesis by the review's first author and is 24 journal pages long (16 pages of text and 8 pages of references). To be included in the research synthesis, an article had to contain data relating discrimination to a health outcome. The review reports the search terms and databases used for the review, as well as the specific criteria for inclusion of articles in the review. The sample consists of 192 articles of which 134 are included in the quantitative meta-analysis.

### Getting grips with Technology

Before starting work on your review, make sure you are familiar with the range of electronic search technology available today. This chapter assumes you will be using some type of computer-based search technology.

Recent years have seen a shift away from doing **literature reviews** using paper-based library catalogue systems, manual browsing of library shelves and the photocopying of hard copies of research studies. The wide availability of computer-based search technology, coupled with the facility to download digital copies of studies straight from electronic databases or publisher websites, have made it potentially much easier and quicker to do **literature reviews**.

Some of the more popular ways to electronically search for and/or download published studies include using general Web-based search engines (e.g., Google), specialist research-focused search engines (e.g., Google Scholar at http://scholar.google.com.ezproxy.aut.ac.nz/) and research literature databases accessible through university libraries. Features of these three methods are summarised in Table 7.2.

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Table 7.2 SEARCHING FOR RESEARCH LITERATURE USING ELECTRONIC SOURCES

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Preliminary Thinking and Scoping Your Review

Begin by thinking carefully about your review's scope and purpose. Are you aiming to do a general review or a briefer, more focused review? How much time do you have to do the review? How comprehensive or thorough does the review have to be? What are the key research questions or topics you want to cover? Are the research questions and objectives specific enough to guide the research design and data collection?

At the same time, try to get an initial idea of how much literature is out there on your topic. This can be especially important if you are planning to commit to completing your review within a fixed timeframe or budget. Start with a small preliminary search of an easy-to-access database like Medline or Google Scholar. Enter a brief description of your topic in the search area of the database and see how many articles it finds. Look at the abstracts for the articles. If there seem to be many studies all relevant to your topic, then potentially your review may need to be quite complex and require a lot of time to complete. Alternatively, if only a few relevant studies appear, there is a chance that your review could be done quite quickly.

If there is a lot of literature available, and if there are already published reviews on the topic you are reviewing, you might consider setting a date limit for your review when using electronic databases. For example, if you are doing a search in April 2011, you may specify a date limits of 2000 to 2011 (or 2000 to current). In this case, only articles from January 2000 to the current date will be retrieved. An example using date limits is shown in (p. 112).

A useful procedure in the planning stage of a literature review is to talk to people who are knowledgeable about the topic you wish to review. Ask them about current controversies in the field, what are some key papers or articles on the topic, and which research centres or teams have been publishing or reporting on the topic, or related topics. Discussions with key informants can alert you to some of the key ideas you need to consider when planning your literature review.

Sometimes a literature review may be done as part of a team project. In this case, it may be possible for specific members of the team to focus on topics with which they are most familiar. However, when integrating the individual contributions and bringing the review together as a single document, coordination of the team and the writing styles used becomes important (See )

Defining and Refining Your Topic

In the early stages of the literature review, it is quite common to experience a shift in specific areas of interest once you start reading relevant literature. For this reason, be flexible in the early stages when reading relevant articles and be prepared to revise any specific objectives for your review during the early stages of the review. While this flexibility may not be possible during a systematic review (clear objectives for systematic reviews are expected to be set in advance), it is common during thesis research to spend several weeks or months clarifying the specific areas of focus for a review. During the early stages of reading relevant literature, a good strategy is to note emerging themes and ideas, and develop and revise a set of specific questions, or sub-topics to create an overall framework for the review.

Box 7.3 Doing a Large Literature Review as a Team

Agencies and businesses often commission researchers to do literature reviews on selected topics. In some cases these literature reviews (sometimes called 'systematic reviews' or 'evidence-based reviews') can be very wide-ranging and include hundreds or even thousands of studies or published reports. Such extensive reviews are usually done by a team of researchers rather than just one person. The team may include people with special training in the use of electronic bibliographies and online search software. Often particular criteria will be used to define what kinds of studies will qualify for inclusion in the review. For example, a study might have to use a certain kind of research design, such as a case-control group or comparison group, before it is considered 'strong' enough evidentially to be included in the review.

Some literature reviews specify very stringent criteria for the studies that will be included. In these cases the research team may have to check through numerous papers and reports before finding perhaps only a handful of...
studies that actually qualify for inclusion in the review. This work is sometimes aided by the use of a standard checklist or question sheet which is filled in for each study report or paper being assessed.

Managing the process of reviewing many hundreds or thousands of individual study reports as a team is a significant logistical challenge that should not be underestimated. The challenge will be greater if research team members are located in different parts of the country or have never worked with each other before. Ideally, there should be one person in the research team who takes overall responsibility for co-ordinating the work of the team. This includes making sure each research team member is receiving the correct studies to review and the criteria for excluding studies is being applied consistently by everyone in the team.

When reporting the findings of the review, normally the review topic is broken down into separate sub-topics. Different members of the research team can then take responsibility for writing-up the findings relevant to each sub-topic. Sometimes key features or data from individual studies are summarised in ‘evidence tables’, rather than trying to describe each study in detail in the actual text of the report.

Team members working together on a large-scale literature review should have opportunities to check and critique each other’s work before it is reported or published. In the end, everyone should be happy to have their names associated with the final review report.

Using Key Words in Electronic Searches

To find the most relevant research reports on a topic, you will need to be creative and to think broadly about the key words and subject headings that could possibly be related to the topic in which you are interested. Authors of research reports, or the people preparing reports for entry into literature databases, may conceptualise or describe the research topic in several different ways.

During your initial reading, start making a list of possible key words you could use in a systematic search of the literature. For example, if you are interested in smoking in adolescents, you could include key words such as teenagers, youth, adolescents, students in combination with smoking, tobacco, drug abuse, substance abuse. You could also perhaps look under addiction and nicotine.

If you do your literature search on an electronic literature database, most of these databases will have advanced search procedures allowing you to use more complex search sequences. Based on the example above, on an electronic database you might use the following search string:`

(teenagers or youth or adolescents) and (smoking or tobacco or nicotine)

The underlined words ‘or’ and ‘and’ in the above search string (sometimes referred to as Boolean logic) allow the creation of more complex search strings. These produce more targeted and efficient searches. Figure 7.1 shows a diagram of this search string.

FIGURE 7.1 COMBINING TERMS FOR A LITERATURE SEARCH

If the initial search gives too many ‘hits’ (articles located), try restricting the search by adding a qualifier like the following:

(teenagers or youth or adolescents) and (smoking or tobacco or nicotine) and causes

After completing your initial search you might then want to focus specifically on studies that have attempted some type of intervention to help young people quit smoking. In this case you can either continue selecting from the larger pool of articles already located or start a new search. To reduce the number of articles located above, you could try an additional qualifier such as the following:

(teenagers or youth or adolescents) and (smoking or tobacco or nicotine) and (intervention or quit or cessation)

shows an example of a literature search history using the terms shown in the preceding text. The electronic database used for the search is called PsycINFO. See how imposing limits on the eligible articles dramatically reduces the number of articles located. The limits used were: (a) full text sources only, (b) English language sources only and (c) published between 2000 and 2009 (the most recent date) only. Also, see how the search procedures allow the progressive focusing of the search down to only those publications that include all the specified search terms. The final result of this search
was 117 articles. The titles and abstracts of these articles can now be read to select the ones most relevant to the objectives of the literature review.

**EXAMPLE OF A LITERATURE SEARCH HISTORY USING PsycINFO**

<table>
<thead>
<tr>
<th>Search terms used (articles located)</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (teenagers or youth or adolescents)</td>
<td>112,672</td>
</tr>
<tr>
<td>2. limit 1 to (full text and human and English language and yr=&quot;2000–2009&quot;)</td>
<td>4,402</td>
</tr>
<tr>
<td>3. (smoking or tobacco or nicotine)</td>
<td>28,830</td>
</tr>
<tr>
<td>4. limit 3 to (full text and human and English language and yr=&quot;2000–2009&quot;)</td>
<td>2,169</td>
</tr>
<tr>
<td>5. Combine 4 and 2</td>
<td>337</td>
</tr>
<tr>
<td>6. (intervention or quit or cessation)</td>
<td>109,941</td>
</tr>
<tr>
<td>7. limit 6 to (full text and human and English language and yr=&quot;2000–2009&quot;)</td>
<td>5,808</td>
</tr>
<tr>
<td>8. Combine 7 and 5</td>
<td>117</td>
</tr>
</tbody>
</table>

Note: This search was conducted using the PsycINFO database in April 2009.

The limitations (full text, English, 2000–2009) are shown for each search for illustrative purposes. In practice, the limitations need only be used once – on the first search string.

If you get to a stage where the search strategy produces too few articles, go back a stage and try alternative search strings until you get a manageable number of articles. You can also check more than one database to locate additional articles.

A good idea is to save a copy of your literature search history so you can use it when you write your report. It is becoming increasingly common in theses and dissertations to report the specific literature search terms used and the outcomes. An easy way to save your literature search history is to copy and paste it straight into a word processor document.

**Widening the Literature Search**

Extending the scope of your search will usually involve accessing not just one, but several of the major health and social science-related electronic databases listing research journals and books (see Table 7.4). Some of the more useful include Medline, Sociological Abstracts, PsycINFO and PubMed. With Internet access, you can also search many university library catalogues, as well as library catalogues in numerous public sector agencies throughout the world.

**TABLE 7.4 EXAMPLES OF ELECTRONIC DATABASES FOR LITERATURE SEARCHES**

<table>
<thead>
<tr>
<th>Discipline or subject area</th>
<th>Examples of databases</th>
<th>Description of specific databases*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>ERIC</td>
<td><em>ERIC</em> provides access to references and abstracts from over 750 journals, as well as documents produced by the Education Resources Information Centre and conference papers and reports</td>
</tr>
<tr>
<td></td>
<td>Education SAGE</td>
<td></td>
</tr>
<tr>
<td>Health and medicine</td>
<td>Medline</td>
<td><em>MEDLINE</em> includes bibliographic citations and author abstracts from more than 5000 biomedical journals published in the United States and 80 other countries</td>
</tr>
<tr>
<td></td>
<td>CINAHL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PubMed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ageline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cochrane Library</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>PsycINFO</td>
<td><em>PsycINFO</em> abstracts over 1900 psychology journals as well as book chapters, books, dissertations and technical reports. The major database for psychology</td>
</tr>
<tr>
<td></td>
<td>PsycEXTRA</td>
<td></td>
</tr>
<tr>
<td>Sociology and other social sciences</td>
<td>JSTOR</td>
<td><em>JSTOR</em> is a fulltext archive of scholarly journal literature, including key social science journals, back to their first issues</td>
</tr>
<tr>
<td></td>
<td>Anthropology Plus</td>
<td><em>Sociology</em> database provides access to international literature in sociology and related disciplines from approximately 2000 journals</td>
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<tr>
<td></td>
<td>Sociological Abstracts(Sociofile)</td>
<td></td>
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<tr>
<td></td>
<td>Proquest Social Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Journals GenderWatch</td>
<td></td>
</tr>
<tr>
<td>General databases</td>
<td>SCOPUS</td>
<td><em>SCOPUS</em> is a large abstract and citation database of research literature and Web sources. It covers nearly 18,000 peer-reviewed journals from more than 5000 publishers, 600 trade publications, 350 book series, 3.6 million conference papers and 435 million scientific webpages</td>
</tr>
<tr>
<td></td>
<td>Google Scholar</td>
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<tr>
<td></td>
<td>ScienceDirect</td>
<td></td>
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<tr>
<td></td>
<td>Web of Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proquest Dissertations &amp; Theses</td>
<td></td>
</tr>
</tbody>
</table>

*These descriptions are taken from summaries on the database websites
It is useful to develop some experience of using these and other databases yourself. However, if time is pressing, some library staff will conduct literature searches on request (usually for a fee). If the job is likely to be large, it might be worth hiring an experienced person to do the work for you.

Another useful source of information can be journals that specialise in providing research review articles on a particular topic or area. Go to these kinds of journals early in your search and see if you can find several reviews on your topic or on the broader area to which your topic is related. There are a number of review journals published each year which start with the title ‘annual review of’ … To locate these journals, go to a university library and check its subscriptions using the search string ‘annual review’. A recent check showed about 50 journals that start their titles with the words ‘annual review’. As an example, the Annual Review of Psychology (2008 issue) had articles like:

- A comprehensive review of the placebo effect
- Children's social competence in cultural context
- Health psychology: the search for pathways between behaviour and health.

As well, remember to check the literature cited in the reference lists of the articles or books you collect. These lists often include studies regarded as essential reading by experts in the field.

Aim to obtain abstracts for as many of the references you find as possible. These are invaluable for assessing which publications are worth getting hold of, and which are not. It is quite common to use the abstracts for the initial screening of articles before deciding the ones you will try to obtain in full.

Sometimes, after searching various databases, you might find only a small number of publications on the topic in which you are interested. This could be simply because not much has been written about the topic (quite possible in specialised areas). Alternatively, you may not be searching the best databases (try others), or you may not be using the best key words or subjects for searching (tip: some databases have an index with cross-references to similar key words and subjects).

Remember, too, that certain types of literature may not be included in some databases. For instance, some databases cover only scientific journal articles, not books. In-house reports are also often hard to find. For these sources, you may need to go directly to the relevant agencies involved. If in doubt about what to do at any stage, ask an information specialist or librarian, preferably one who is familiar with searching for social science, health or medical literature, as these areas include a range of specialised subjects.

If you are doing a systematic review, you need to be aware of possible bias in using only published sources of literature. Research journals are more likely to publish studies showing significant differences than studies showing no differences. As a result, studies showing no differences are usually under-represented in the published research literature.

One way of countering this potential bias is to contact research groups known to be doing research on the topics in which you are interested and requesting copies of unpublished research reports. Sometimes unpublished reports (often referred to as the ‘grey literature’ because it is usually not peer-reviewed) are available from the websites of research organisations. Other possible sources of unpublished reports include clinical research registries, clinical trial registries, and unpublished theses and conference paper listings. In addition, unpublished reports can sometimes be found on the websites of government agencies and agencies that fund research. An example is the website of the Centers for Disease Control and Prevention in the United States (http://www.cdc.gov.ezproxy.aut.ac.nz), which has several hundred reports and links to research agencies on health and safety topics.

One of the most difficult things about literature searching is knowing when to stop. It is quite easy to extend your search in ever-widening circles and get bogged down with pages of references to literature that is only tangentially relevant to your topic. If you think this is starting to happen, reflect again on the purpose of your review and its key questions. Have you already got enough good material to answer the questions you are investigating? Certainly it is time to stop if you are turning up the same literature over and over again, with very few new references.

**Literature reviews** can become dated quite quickly. Specify the month and year in which the search was finished (e.g., August 2011) and use this as the end date for the search period. Save your electronic search terms so you can repeat the search towards the end of the project if needed, to check if any new articles have appeared since the date you conducted the main search.

**Storing Your Search Results**

It is a good idea to store the results of your electronic searches on computer rather than printing them out on paper. This can save time later when you are writing up your review and needing to insert the reference details of the publications covered in your review.

You should also weigh up the potential benefits of using specialised bibliographic software to store your references and abstracts. Examples include programmes such as Endnote, Procite, Reference Manager and RefWorks. Using these programmes to create a personal bibliography takes some additional work in the early stages, but can save a lot of time in the later stages of a literature review when you are listing the publication details of all the material you have read (see Chapter 9, Software for Research, for more information on bibliographic software). At least one bibliographic package (RefWorks) has an online version that offers a free trial.

Bibliographic software has several advantages. It allows all references to be stored in one file that can be easily copied and backed up. It speeds up the insertion of reference citations in the text of documents (when you write your review or report), and saves a lot of time when you compile your reference list for your review or report. Many online journals now provide a facility for you to download the reference details directly to several types of citation manager software. Clicking
Getting Hold of Publications

Once you have compiled a list of potentially useful references (including abstracts), a good idea is to prioritise the publications that look most relevant and try to get hold of these first. Some journal articles will be available electronically as online, full-text articles. These are mostly in pdf format and can be read on a computer or printed out using Adobe Acrobat reader software, which is widely available as a free download.

A few journal sources are free for public download, but usually you have to pay a fee. Accessing the journal through a university library system (requiring individual logon) may allow you to open or download full-text options if the library has a subscription to the journal.

Other key publications may not be available online and will need to be retrieved manually from different sources. In many instances you will be able to access books and articles from local libraries, photocopying parts that are relevant (while remaining aware of copyright restrictions). If you are not in a position to do this work yourself, many libraries also offer literature retrieval and photocopying services. However, doing your own document retrieval and copying means you get another chance to work out which publications are likely to be worthwhile, which can save time in the long run.

Do not expect to get everything you need quickly. Some hard-to-get publications may have to be obtained from libraries outside your local area or country. This can take several days or even weeks in some cases.

Critically Appraising the Literature

Once you have collected a reasonable selection of relevant journal articles, book chapters, technical reports or other material, you can start reading and assessing the literature. At this stage, it may be usefull to sort the literature into groups. For example, as an initial sorting procedure you may wish to distinguish several types of literature documents. These could be categorised as: published research reports that include original findings based on data collected; unpublished research reports (which could also include theses and dissertations); reviews of previous research, theoretical papers and commentaries expressing views about a specific field or topic; and papers written to advise practitioners on good practice. If you are using bibliographic software, you could add a key word to the listing for each document (e.g., 'review', 'commentary') to distinguish these types.

When assessing the quality and suitability of original research reports, there are likely to be several criteria you will need to consider. Several authors have provided detailed advice on how to critically assess research literature (e.g., Attree & Milton, 2006; Girden, 2001; Greenhalgh, 1997; Hunt & McKibbon, 1998). Probably the first criterion is to assess the relevance of each item for your research topic. Relevance may be assessed in several ways. Most commonly, relevance is assessed in terms of how close an article is to the topic or subject. A second type of relevance might be in terms of the sample or population group that was the focus of the research. A third type of relevance is in terms of how similar the research methods or specific data collection techniques are to your topic. Sometimes studies may be on a different topic but are relevant because the data collection methods are similar to what you plan to use.

A suggested procedure for sorting literature is to do an initial scan through the items and sort them into three groups; (i) definitely relevant, (ii) possibly relevant and (iii) definitely not relevant. Put aside or discard the 'not relevant' group, read the 'definitely relevant' group in more detail to clarify your ideas and identify key words commonly used. Then go through the 'possibly relevant' group and try to allocate items into either the 'definitely relevant' or 'not relevant' group. Once you have identified sufficient items in the 'definitely relevant' group, go through them individually in more detail and assess their quality.

Assessing the quality of literature is a technical task that takes some experience and familiarity with research procedures and reporting conventions. However, even beginning researchers should be able to form some idea of the quality of the research and how well it is reported. Lists some questions to bear in mind when reading articles. These criteria can help in assessing the overall quality of the research reports you are reviewing.

### Box 7.4 Guide for Critical Appraisal of Research Reports

- What is the purpose of the research reported?
- Are the aims and objectives clearly stated and specific enough to link directly to the data gathering and findings?
- Are the sources of information cited credible? (such as literature sources)
- Is the rationale for the research design clear?
- Are the research methods described in sufficient detail to allow another researcher to replicate the research?
- Are the research methods justifiable and defensible given the research objectives?
- Are there clear links between the findings reported and the conclusions?
- Is the report clearly written and easy to understand?
- Is the report published in a reputable journal or by a well-known publisher or is it from a credible Internet source?
- Are the authors already known for their work on the topic reported?
Remember that not all articles published in refereed journals are necessarily of high quality. Conversely, not all unpublished technical reports are necessarily inferior to published versions. Critical evaluation of literature from all sources is essential. Literature from the Internet can especially be a challenge; there are fewer gatekeepers in electronic publishing compared to print publishing, and author and copyright information can be hard to locate. It is worth checking out publications that give guidance on how to critically assess sources of information from the Internet and evaluate the credibility of websites (e.g., Callahan & Thornton, 2007). Much of the information available on the Internet, that might seem to be research-based, may be misleading or false.

Another point to bear in mind is that different critical appraisal systems tend to be used in reviews of quantitative research studies (i.e., studies where the results are analysed and reported as numbers) compared with reviews of qualitative research studies (i.e., studies where the results are interpreted and described in words). For example, systematic reviews of quantitative studies assessing the effects of health treatments often include only research studies that meet specified criteria for quality. Generally, according to these criteria, the 'best' or highest level of evidence (Level I) is that obtained from a properly randomised, controlled trial. Level II evidence refers to studies that have used well-designed controlled trials without randomisation or well-designed cohort or case-control studies (cf., Concato, Shah, & Horwitz, 2000). More specific quality criteria used to assess whether or not a trial is well designed include:

- the extent to which the study reports steps taken to minimise bias in relation to sample selection and treatment conditions
- whether the study reports details of its sample size, power calculations for statistical analyses and the magnitude of reported treatment effects.

A checklist approach for reviewing qualitative studies is described by Attree and Milton (2006). Their Qualitative Appraisal Checklist covers eight quality categories: background; aims and objectives; context; appropriateness of the research design; sampling; data collection; data analysis; reflexivity; and usefulness of the research. It uses a scoring system, based on yes/no ratings on 23 specific attributes, with four summary assessment categories for each study:

- A – no or few flaws
- B – some flaws
- C – considerable flaws but the study is still of some value
- D – significant flaws that threaten the validity of the whole study.

Writing Your Review

How much time and effort you put into writing up the results of your review will depend to some extent on the purpose of the review. If you are intending to use the review mainly as a basis for preparing a research proposal, or as a starting point for developing some new research objectives, then it may not be necessary to prepare an extensive report. On the other hand, if the review will be widely published or circulated, and perhaps used by many different people to support important decisions, then preparing a well-organised and comprehensive report will be vital.

No matter what the size or importance of your literature review, at the beginning of your report you should always clearly state the specific objectives of the review and the topics it covers. You should also indicate why you conducted the review.

After this, it is usually good practice to include a paragraph setting out how you conducted your literature search. This might include listing the key words used, the electronic databases searched, the search sequences used (see the example in the key word section above) and the number of articles located at each stage.

The main sections of your review should describe, compare and discuss the different themes or topics covered in the literature you examined. Usually this is a straightforward narrative account. Occasionally, a more quantitative approach may be appropriate, for example in a meta-analysis where data from several studies are aggregated. This kind of review may contain multiple tables summarising statistical trends in the datasets reviewed.

Aim to organise relevant information from the literature under a series of headings or topics. Initially, it can be difficult identifying discrete topics and determining what order to present them in. Topics can overlap, and the same articles or books can cover several different topics. Drawing diagrams showing the interrelationships of topics can be helpful in planning a logical structure for your literature review. For larger reviews, it may also be helpful to use qualitative analysis software packages, to assist with the organisation of your review and the identification of key themes (see ).

When summarising a specific study in the main body of your review, it is usual to indicate very briefly when and where the study was done, who the subjects were, how the study was done, its results and the author's conclusions. You may also need to include your own assessment of the limitations of the study methodology, and how the results of the study compare and contrast with other evidence.

Read the full-text of articles, not just abstracts, and aim to reflect the full range of opinions or ideas you have found, rather than just concentrating on material that supports your own theories or arguments.

Aim for a high level of accuracy when summarising other people's research. Try to reflect the authors' intentions and meanings as precisely as you can, and make it clear when you are expressing your own point of view, rather than other people's. When directly quoting another author, indicate this clearly (for example, by using a different font or text style, indenting, or quotation marks) and always include the page numbers of the article or book from which the quote is taken.

Box 7.5 Using Qualitative Analysis Software in a Literature Review

Raoul has to carry out a literature review in which he knows there are likely to be a large number of papers to analyse, perhaps more than 100. Based on previous experience of doing a literature review for his doctoral thesis, in which he reviewed about 60 papers, he decides to use qualitative analysis software to do the analysis. In the previous review, it had taken him several weeks to locate, download and read the papers, then about two months to do an initial draft of the review. He wants to speed up what to him seemed to be quite a slow process. There are no detailed guidelines that he can find indicating how to do a literature review using qualitative analysis software. He has some previous experience of using the QSR NVivo software when he did an analysis of 18 qualitative interviews. He considers himself familiar with the basic operations of the software but not an expert at using it.

After he has located the papers to be included in the review (a total of 110 papers), he starts downloading the full text copies of the papers (mostly pdfs) and creating internal documents in the qualitative software. Putting in the citation details and abstract for each paper is straightforward as he copies this text direct from the journal webpages. An initial difficulty is that for some of the pdfs the text cannot be copied and pasted into NVivo. He goes back to the journal websites and finds some have full text in webpage format (html) that can be copied and pasted directly into NVivo. However, some do not have full text. He checks with a colleague and finds that a recent new version of Adobe Acrobat writer software has an optical character recognition (OCR) function that can convert scanned text in pdfs into a version in which the text can be copied. After purchasing a copy of the new Acrobat software, Raoul is able to copy the relevant text into NVivo for the remaining pdfs. To get to this stage takes him about three weeks.

After another two weeks, Raoul completes the initial analysis of the 110 articles. He is able to use the top-level categories and sub-categories from the analysis as headings in his literature review report. Using the text from the articles that have been coded into specific categories, he is able to write directly about each category. One outcome he discovers in using the qualitative analysis software is that it focuses the review much more directly on the text of the findings reported in the articles he has reviewed. Although quite a bit of time was needed initially to get the text of the articles into the software, Raoul estimates that using the qualitative analysis software reduced by several weeks the total amount of time he spent on the analysis and report writing for his review.

If you are compiling your references manually (without using bibliographic software), insert the references you wish to use into both your text and reference list at the same time as you are drafting your review document. It can be very tedious inserting references into your document after you have finished writing all your text. If you are using bibliographic software, use the software to insert the reference list when you have finished writing the paper.

The concluding section of your report should summarise the main findings of the review and indicate what, in your view, the balance of the evidence suggests. It can also include your assessment of the rigour and overall quality of the available information, as well as identify gaps in the literature, implications for social or health-related policy and services, or ideas for further studies.

**Structure of Your Review**

The central objective of a review is to write a report that reveals the current state of knowledge on the selected topic. If the review is to provide a context for developing a new research study, the review report should provide a rationale for the new study. It can do this by ending with a series of findings that lead into the proposed research.

An example of an organising structure or writing plan for a literature review is shown in . This hypothetical review is on the topic of ‘The influence of neighbourhoods on social support’. Note how the plan divides the review into sections and lists questions to be addressed in each section of the review.

**EXAMPLE OF A LITERATURE REVIEW PLAN FOR A RESEARCH PROPOSAL ‘THE INFLUENCE OF NEIGHBOURHOODS ON SOCIAL SUPPORT’**

<table>
<thead>
<tr>
<th>Research topic</th>
<th>Examples of literature to be reviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance of topic to proposed research</td>
<td>Why are neighbourhoods and social support important?</td>
</tr>
<tr>
<td></td>
<td>What evidence is available in published sources that make plausible links between support, neighbourhoods and well-being?</td>
</tr>
<tr>
<td>Social support</td>
<td>What are the main types of social support?</td>
</tr>
<tr>
<td></td>
<td>How is social support measured?</td>
</tr>
<tr>
<td></td>
<td>Existing social support questionnaires</td>
</tr>
<tr>
<td></td>
<td>Advantages and disadvantages of each type of measurement</td>
</tr>
<tr>
<td>Neighbourhoods</td>
<td>Physical features of neighbourhoods</td>
</tr>
<tr>
<td></td>
<td>How do neighbourhoods vary within cities and across a country?</td>
</tr>
<tr>
<td></td>
<td>Features relevant to social support</td>
</tr>
<tr>
<td></td>
<td>Which features are associated with higher or lower levels of support?</td>
</tr>
<tr>
<td>Interventions to increase support</td>
<td>What studies have been done on changing physical and social features of neighbourhoods to increase support?</td>
</tr>
<tr>
<td></td>
<td>What types of interventions have been reported?</td>
</tr>
<tr>
<td></td>
<td>How successful were they?</td>
</tr>
</tbody>
</table>
What components of interventions seem to work across a range of different environments?

| Relevance to proposed study | Pull together the key ideas from the earlier parts of the review which provide a convincing rationale for the proposed study |

Develop a clear structure for the review using headings and sub-headings and sections that flow in a logical sequence. Outlines a general format for a literature review. Identify the main themes of the review near the beginning. Re-assess the sequencing of your sections and headings after you have written the review to make sure you have a sequence that follows a logical pattern. This can be adapted to suit the particular purposes of your review.

**Box 7.6 General Format for a Literature Review**

- **Cover Page** (if not included in a research report)
  - Title of review, Author, Author's affiliation and address
  - Date, Review prepared for (name of organisation or person, if relevant) Summary (if not included in a research report)
  - About 150 words describing the topic and main conclusions

  **Introduction:** State the specific objectives of the review. Describe the search procedures, key words used and databases accessed in sufficient detail so that a reader could replicate your search. Outline the topics to be reviewed. Describe the sub-topics or themes to be covered and how they are related to the overall topic of the literature review.

  **Topic A** – Review themes and findings relevant to a specific topic
  
  **Topic B**
  
  **Topic C** etc.

  **Conclusions:** Summarise the most important findings from the review and state the implications of the literature reviewed in relation to the objectives of the review.

  **References:** List all references cited in the review at the end of the document you are writing.

Remember to find out what length is expected for your review. While 20–30 pages may be suitable for a dissertation or thesis, about 4–7 double-spaced pages might be appropriate for manuscripts to be submitted to journals. For a research proposal of about 12 pages, a 2–3 page literature review would be suitable, unless there is a specific reason for a longer review.

The review should point out both consistencies and contradictions in the literature as well as offer possible explanations for these (e.g., use of similar or different theoretical conceptualisations or research methods). Studies that are particularly relevant should be described in some detail. However, reports that present very similar or comparable findings usually should be grouped together and briefly summarised.

The writing plan you develop for your review will probably need to be revised several times as additional ideas occur to you after reading and re-reading the literature and as the conceptual framework for your review evolves. To help with this, look at some of the most relevant journal articles you have located and think about how the authors have written their review section.

A single section from a literature review is shown in Appendix 7.1 at the end of this chapter as an example of a writing style commonly used in literature reviews.

**Writing Style and Formatting**

Using an appropriate writing style for a literature review is something that does not come easily to many people. Expect to go through several drafts of the review and get feedback from other people. The written review should not consist primarily of a series of quotes or a series of abstracts.

When writing literature reviews, a common error is to review a number of articles sequentially, giving prominence to the authors’ names. Avoid patterns like: ‘Brown said that …. Jones reported that …. Smith concluded that …. Remember to focus the discussion on issues, topics or themes, not individual articles or authors. For example:

> Several studies have reported that parenting programmes relying primarily on lecture presentations were ineffective in changing parent behaviours towards children. (Brown, 2003; Jones, 2001; Smith, 2004)

Multiple citations (such as those shown in brackets above) should be listed alphabetically by first author, and by earliest to most recent year for citations having the same author.

**Use of Quotations**

When using quotations from another report or publication be careful about using them appropriately. Be selective about using quotations in a literature review and use them very sparingly. Most published reviews use very few quotations or none at all. If you do wish to use a quotation, make sure you introduce each quotation in the text prior to the quotation.
and note the source immediately following the quotation. Occasions when it would be appropriate to use quotations include:

- where a source has expressed a key point especially well
- quoting the actual text from a source which you are critiquing
- when noting a controversial statement made by another author
- to illustrate the language style used in a specific source.

Text that includes long strings of quotations is inappropriate for a research review and indicates a poor writing style. Especially avoid putting together long strings of quotations with just brief sections of your own text in between. Unfortunately, some thesis students tend to use long strings of quotations in their literature review in the mistaken belief that quoting large chunks of text from another source shows their familiarity with the topic.

A quotation written into the text should have quotation marks before and after the quotation. If the quotation is longer than about three lines, indent the quotation as a separate block quote without quotation marks. An option is to use italics or another altered font to make quotations stand out from the main text. Ensure that the appropriate reference details including the page number of the source are cited at the end of the quote (e.g., Smith, 2005, p. 26). Where the source is an online document with no page numbers, put the paragraph number or the section heading where these are shown in the source (e.g., Smith, 2008, Conclusion section, para. 3).

In terms of copyright, note that if longer sections of text are quoted, or if tables or figures from another source are used, copyright permission may need to be obtained. Copyright prohibits use of lengthy quotations or use of any item that is seen as a stand-alone entity, such as a table or figure, without the permission of the author or copyright owner.

While there is no specific word limit relating to potential copyright infringement when using quotations, be careful if you are quoting more than about 300 words from a single passage in a source. The concept of fair use or fair dealing allows the use of quotations from other sources providing it is in the context of reviewing or critiquing the original source. For fair dealing use, it would be expected that the quotation would be introduced in the preceding text and comments made about the quotation in the accompanying text.

Citing References

Settle on a standard referencing system for citing literature in the text of the review and for setting out references in the reference list at the end of the document. For research reviews, do not use the label 'bibliography' – unless you are compiling a general bibliography that lists all the research publications located on a particular topic. Which referencing system you use may depend on your academic subject's usual practice or the requirements specified by a publisher, client or funding agency. Look at journal articles on your topic to find examples of how to apply these standard referencing systems, or read a style manual.

Harvard and APA Citation Styles

One standard referencing system, called the Harvard style, is used in psychology and many other disciplines and journals. In this system, text citations (references to specific research literature in the text of a review) uses the ‘author, date’ format, e.g., (Smith, 1998). A version of the Harvard system is used in the present book. The Publication Manual of the American Psychological Association (APA) sets out the formatting for a commonly used version of the Harvard system, and gives detailed examples.

Vancouver Citation Style

The Vancouver system is commonly used by medical journals and some other journals. In this system references are numbered consecutively in the order in which they are first mentioned in the text. References in text, tables and legends are cited using Arabic numerals in parentheses, or in some journals by using superscript numbers. References cited only in tables or figure legends are numbered in accordance with the sequence established by the first identification in the text of the particular table or figure. In this system, the titles of journals are abbreviated according to the style used in the Index Medicus.

Documents from Web Sources

Increasingly, documents cited in proposals and reports are being accessed from webpages on the Internet. If you are using documents from the Internet, you need to note the URL (webpage address) and the date you accessed the document. shows a standard set of APA formats for citing Web documents.

<table>
<thead>
<tr>
<th>Box 7.7 Citing References from Online Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online periodical (APA style)</strong></td>
</tr>
<tr>
<td>Title of article. Title of Periodical, xx, xxx-xxx. Retrieved month day, year, from: source (URL or DOI).</td>
</tr>
</tbody>
</table>

*Example of article from online journal that also produces a print version*

10.1177/1098214008319175.

Example of article in an Internet-only journal


Online document (APA style)


Example


If a document is contained within a large and complex website (such as that for a university or a government agency), identify the host organization and the relevant programme or department before giving the URL for the document itself. Precede the URL with a colon.


Given the rapid development and continuing restructuring of webpages, many specific URLs cited from the Internet are likely to change after several months or years. This means that specific Internet addresses (URLs) may not work in the future. To get round this problem, many academic publishers have begun assigning a Digital Object Identifier (DOI) to journal articles and other documents. A DOI is a unique alphanumeric string assigned by a registration agency. When a DOI is available, include the DOI instead of the URL in the reference. As well, a good safeguard is to clearly cite the title of a paper and the website organisation’s name (e.g., Columbia University Press). A browser search on key terms from the title or organisation provides another way of locating a specific paper.

To keep your online sources up to date, check all URLs in your reference list prior to the submission or publication of your report. If the document you are citing has moved, update the URL so that it points to the correct location. If the document is no longer available, you may want to substitute another source or omit it from your report. For sources whose full text is accessible by subscription only, give a higher level URL such as the home page, the contents page of a journal or publications page of an organisation.

Plagiarism and Acknowledging Sources

Plagiarism refers to the use of other people's text or ideas without appropriate acknowledgement of the source from which the text or ideas has been taken. With the development of the Internet it is relatively easy to find sources from which text can be copied into a document on a word processor. Unfortunately plagiarism is quite widespread, but with the growing sophistication of Internet search engines it is also relatively easy to detect (Braumoeller & Gaines, 2001). An example was reported by a faculty member teaching a research methods course. For this course, the students were required to do a brief literature review. In the first year in which all reviews were required to be submitted electronically for checking for plagiarism, four out of 45 students had copied substantial sections of text without appropriate acknowledgement. As a result, the four students were penalised by having their grades reduced. With the development of very efficient checking systems for plagiarism, such as Turnitin, it is now relatively easy to detect unacknowledged copying, or edited copying where just a few words from the original source are changed.

When describing in your own words specific ideas or key points taken from other sources, use citations to acknowledge the source of the idea. If you use the actual text from another source, make sure you format the text as a quotation with the source details appropriately acknowledged. Examples of citing literature and using quotations are shown in Appendix 7.1 at the end of this chapter.

Plagiarism is taken very seriously by academic institutions and there are often severe penalties for students engaging in plagiarism (see ). Researchers also are likely to suffer negative consequences from engaging in plagiarism.

**Box 7.8 Example of Plagiarism in a Masters Thesis**

Tina completed a research project for her Masters thesis in public health. When her supervisor was reading drafts of her literature review chapter, he noticed the style changed in one section that consisted of nearly three pages of text. He went to a search engine, typed in a phrase from this text (about five words) as a quotation search and quickly found a technical report from which the text had been taken. Tina had made only a few minor changes in the text and had not acknowledged the source of the material.

The supervisor highlighted the copied text and wrote a warning message in margin. Tina subsequently submitted the thesis without sending it to the supervisor for a final check. When the thesis was sent for external examination, one of the examiners noted that some of the literature review chapter contained plagiarism and recommended a fail grade for the thesis. As a result of the plagiarism, Tina's thesis failed the examination and two years' work she spent on her thesis topic was wasted.
Specific Points Regarding Writing Style

Given the range of mistakes that people commonly make when trying to do a literature review for the first time, the following are some additional points to note when writing a review.

Use a Title or Chapter Heading Which Indicates the Topic

For a thesis or dissertation, avoid using a title or chapter heading such as ‘Literature Review.’ This gives no indication of the review topic. Instead, use a title that shows the actual topic, for example ‘Review of literature on youth smoking’.

Provide a Context for the Research Reviewed

When reviewing research literature, make it clear whether each literature source refers to research in your own country or research from other countries. Do not assume that research carried out in other countries can be generalised to your own country, even if you share a common language. Much social science and public health research is likely to be context-specific and not necessarily applicable to multiple locations, communities or peoples.

Review Substantive Topics Separately from Research Methods

A common error in literature reviews is to include a great deal of discussion of research methods or approaches at the expense of discussing the findings of studies. It is best to review methodological approaches in a separate section of your review, following the primary review of your main topic. For example, if you are reviewing literature about the most successful interventions for smoking cessation among young people, first review what types of interventions have been tried and which are the most successful. In a separate section, review the methodological issues, such as types of measures used in research relating to smoking cessation and their advantages and disadvantages. It is certainly important to cover methodological issues in a review where they are relevant to supporting or discounting the findings of a particular piece of research, or a specific method of research.

If your literature review is part of a report describing the methods and findings of a research project, it may be useful to include a review of the methodological literature to provide a context and justification for the research methods used in the project. Ideally, this methodological review should be included in a section at the end of your main literature review. It should not be included in the report's methods section or chapter. For a thesis or dissertation, if the methodological review is quite long (e.g., more than 10 pages) it may be best to put it in a separate chapter, following the main literature review chapter.

Use of Secondary Citation Sources

Do not routinely use secondary citations when referring to literature sources. For example, a commonly used (and incorrect) format is:

The study by Smith (1975); cited in Brown (1984)...

Cite only the source you have seen. Secondary citations are rarely used in research reports and literature reviews. When used regularly they are usually an indication that the writer has used only a small number of original sources. Secondary citations should only be used in the following circumstances:

- when you include a quotation reported in the secondary source that was originally quoted in an earlier source
- when you report specific data from a secondary source where the data came from an earlier study
- for classic or well-known sources or ideas.

The correct citation format for a secondary citation in the text is:

The study by Smith (as cited in Brown, 1984, pp. 56–58) ....

Only the date for the source seen by the writer is noted (see the American Psychological Association Publication Manual, 2001, p. 247). Note that some books on writing styles give incorrect information about the APA style for citing secondary sources.

Separate Document or Part of a Report?

If your literature review is to be a separate document, remember to present it so it can be read on its own, without reference to other documents. Include a cover page and summary. Literature reviews presented as separate documents can be longer (e.g., 15–20 pages double-spaced), compared to a literature review included as part of a research report.

If your literature review is to be part of a research report, check how much detail is needed in the review. In a brief research report, and manuscripts intended for journal publication, it is often appropriate to include a literature review section of about 2–4 pages double-spaced. A more detailed review, for example in a longer technical report, may go up to 5–6 pages single-spaced. If the review is longer than about six pages (single or double-spaced), check whether this will be appropriate for the intended audiences of the report. Many people who are interested in reading the findings of a specific research project may not be interested in reading a lengthy literature review.

Literature reviews that are part of research carried out for Masters or PhD theses are often between 15–30 pages long (double-spaced) and are usually presented as a separate chapter.
Exercises for Literature Searching and Reviewing

1. Develop a set of literature search terms for a research project focusing on depression among people living alone.

2. Briefly describe the two major formats used for citing references and formatting reference lists at the end of a research report.

3. Using your Web browser, find the articles from these DOIs (Digital Object Identifiers)
   DOI: 10.1161/CIRCULATIONAHA.107.725101
   DOI: 10.1177/1098214008319175
   4. Find four electronic databases that would be relevant to a literature search on a topic in which you are interested.

5. Locate three recent journal articles that are research reports on a topic in which you are interested and note the following points about their literature review sections (usually the first section after the abstract):
   1. Approximately how long are the reviews? (e.g., words, pages)
   2. What subheadings were used to structure the reviews?
   3. What was reported about the search procedures used?
   4. How did the authors start and finish their literature review (first and last paragraphs)?

References and Further Reading


Appendix 7.1: Example of a Section from a Literature Review


**Evaluation of Home Visiting Programmes: Research Methods Literature Review**

Structure and Content of Home Visits

A key aspect of home visitor programmes is the structure and content of home visits. Several evaluators have commented on the difficulty of providing detailed information on the content of home visits (e.g., Gomby, 1999; Hauser-Cram, 1990). While a lot of attention has been focused on the intensity (frequency and overall number) of the visits (e.g., Duggan et al., 1999; Olds et al., 1999), most evaluations have relied on programme plans to identify content (Olds et al., 1999) as well as other data sources such as observation (or video) of home visits, reports from mothers/caregivers and reports from home visitors (Gomby, 1999).

The Elmina, New York programme of prenatal and early childhood home visits by nurses was focused on reducing several events. These included: number of subsequent pregnancies, use of welfare payments, alcohol and drug abuse, child abuse and neglect, property crime by mothers, reported serious antisocial behaviour and emergent use of substances by adolescents in high-risk families. The programme produced most benefits among the neediest families. It had few effects on children's development and birth outcomes (Olds et al., 1999).

One common objective in home visits is facilitating access to other services and resources needed by families. Having a home visiting programme does not ensure effective linkage between families and community resources. If families can access other community resources it can potentially amplify the positive impacts of the visiting programme. As was noted in the Hawaii Healthy Start Program,

> For program administrators it means establishing clear working relationships with other community-based programs. For program supervisors it means ensuring that home visitors provide the support and education services that they are best equipped to provide, and that they are encouraged to collaborate with other providers as needed to help families achieve their goals. (Duggan et al., 1999, p. 88)

The other services to which client families could be referred are a crucial element in the success or failure of home visiting programmes. As they are often difficult and expensive to track, evaluations may not effectively assess the full impacts of these other services (Gray, 2001, pp. 25–26). The Hawaii Healthy Start Program (HSP) identified 14 other areas in which at-risk families often needed services. These were: adult health care, child care, respite care, transportation, adult education, housing, nutrition, counselling, substance abuse treatment, support groups, women's shelter, legal assistance, material assistance and financial assistance. For each of these areas the mother's perceived need for services and her experience in obtaining them were measured (Duggan et al., 1999, p. 77).

Visitors can find it difficult to move beyond crisis intervention to help families develop and work towards long-term goals (Gray, 2001, p. 20). It can be difficult for the visitor to decide what to focus on with a family because of limited time and the complexity of problems faced by the family. Some common reasons for deviating from the planned programme during visits have been noted (Gomby, 1999). Visitors may need to attend to immediate crises or other issues.

> ... participants have more positive impressions of workers who provide immediate and concrete options for a family's presenting problem in a non-judgemental manner. (Daro & Harding, 1999, p. 171)

Responding to a mother's or a child's immediate needs is a strength in a programme. However, deviating regularly from the programme means the visitor is not providing the service as the programme designers originally intended. In some cases more effective in-service training may be required. However, options for visitors need to be incorporated in visiting programmes so that the programmes are consistent with the realities that visitors and mothers face.

Variations Across Sites and Programmes

Process evaluations have indicated that service provider organisations differ in programme implementation and this can lead to differences in the outcomes they achieve. In Hawaii, some HSP agencies succeeded in promoting certain aspects of family functioning and child development while others did not, even though all home visitors received the same initial six-week training and same contract requirements. Evaluating only one agency would give an inaccurate picture of system-wide performances (Duggan et al., 1999).

**References**


http://dx.doi.org.ezproxy.aut.ac.nz/10.4135/9781446289044.n7