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Doing a Literature Review in Health[1]

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INTRODUCTION

The literature review aims to identify, analyze, assess and interpret a body of knowledge related to a particular topic and is normally required as part of a dissertation or thesis. In this case, it sets a context for a research study and provides a rationale for addressing a particular research question in the light of an existing body of literature. Research proposals to funding bodies also typically include a literature review. Here the purpose is to justify the proposal in terms of a gap in existing knowledge. Some literature reviews are substantive, stand-alone studies in their own right that serve to assess what is known and what is not known on an area of study. The aim in both cases is to show how a particular topic has been approached by other scholars. Within the health field, the literature review can also aim to assess existing knowledge on the efficacy of an intervention such as the evidence base for the preferred treatment of a particular disease or the response to a social problem.

This chapter describes how to undertake a rigorous and thorough review of the literature and is divided into three sections. The first section examines the two main types of review: the narrative and the systematic review. The second section describes some techniques for undertaking a comprehensive search, while the third gives guidance on how an analysis of the literature can be presented. It is assumed in the chapter that those undertaking a review will have access to college or university library resources and to the Internet. The majority of sources can now be accessed electronically. Those who have not previously searched using an online catalogue or database are advised to seek assistance prior to starting out. Most college and university libraries offer courses, publish guidelines or make help available online.

Throughout the chapter, examples are drawn from recent studies undertaken by the author and others.

TYPES OF LITERATURE REVIEW

All reviews aim to provide an overview of what is known about a particular phenomenon and what the gaps in knowledge are. However, narrative reviews, which are used widely in social scientific research, place an emphasis on identifying the key concepts or specific terms used in the literature and the particular theoretical approaches adopted by different authors to understanding a phenomenon. Concepts and theories may be employed implicitly or explicitly in an investigation of a topic. A review of the literature will identify the range of approaches and offer a critique of their contribution to understanding.

The systematic review of the literature in health and social care has a different focus. It aims to contribute to clinical practice through an assessment of the efficacy of a particular health care intervention and, with the emphasis on evidence-based practice, has become increasingly important. A basic overview is given here but the researcher should seek advice from a trained information specialist prior to undertaking a search. Specialized statistical skills are also necessary (see Egger et al. 2001).

The narrative review

The narrative review is the commonest form of literature review. It aims to show how concepts, theories and methods have developed within particular subject areas. The key differences between concepts, theories and methods are:

- *Concepts*: Terms and ideas used to describe a particular phenomenon.
- *Theories*: Ideas that have been developed to explain a specific phenomenon.
- *Empirical research*: Research that has already been undertaken to observe the phenomena.

- *Methodology*: The philosophical approach adopted by a researcher to study a particular phenomenon and not to be confused with methods.
- *Methods*: Techniques such as questionnaires, observation or interviewing used to collect data.

In a narrative review the reviewer offers a critique in order to assess, analyze and synthesize previous research, and place it in its current context. The review can take a number of forms: a chapter within a dissertation showing the context of the research; a section of a proposal justifying the work; or a stand-alone summation of thinking around a particular subject area. In each, the reviewer draws on and critiques the conceptual and theoretical approach of different authors and offers an assessment and interpretation.

When reading the item concerned, the reviewer seeks to identify the particular conceptual and theoretical approach taken by the author. This is likely to be influenced by the author's background and discipline. So, for example, a political scientist interested in public involvement in health policy making is likely to draw on theories relating to interest groups in the policy process, participation and representation. A sociologist of health and illness writing on the same topic might place their work in the context of people's experience of illness and how this may affect their wish to participate in decisions and policy making. Identifying the conceptual and theoretical approaches taken by different authors is the first step to understanding the literature and, in the writing up stage, will influence the structure of the report, another vital component of the narrative review as will be seen below.

The systematic review

Over the past few decades, evidence-based practice has achieved growing recognition as a means of increasing the efficacy of health care interventions. Initiatives such as the international *Cochrane Collaboration* (see Chapter 19 for a fuller description) and organizations such as the *National Institute for Health and Clinical Excellence* in the United Kingdom assess available evidence to inform guidelines, policy and practice. A systematic review enables the reader to appraise critically the most robust evidence available in an attempt to synthesize what is known, and not known, about the efficacy of particular interventions. According to Petticrew (2001), systematic reviews can be characterized by the following criteria:

- They aim to answer a particular question or test a hypothesis – usually in relation to a particular health care intervention on a particular population group.
- They attempt to be as exhaustive as possible, identifying all known references.
- Studies included in the review are chosen as a result of explicit inclusion and exclusion criteria. The assessment of the evidence and the synthesis of results are based on the thoroughness of a study's research method.

Systematic reviews place an emphasis on judging the quality of evidence. Here, the priority is to utilize studies where the research design minimizes bias – as highlighted by the list below showing the traditional hierarchy of evidence for reviews assessing the effectiveness of a particular intervention. Street (2001) notes that the quality levels of evidence in systematic reviews of health care interventions can be categorized as follows:

- *Level I*: Evidence obtained from a systematic review of all relevant randomized controlled trials.
- *Level II*: Evidence obtained from at least one properly designed randomly controlled trial.
- *Level III.1*: Evidence obtained from a well-designed controlled trial without randomization.
- *Level III.2*: Evidence obtained from a well-designed cohort or case-control analytic study, preferably from more than one centre or research group.
- *Level III.3*: Evidence obtained from multiple time series with or without the intervention, or dramatic results in an uncontrolled experiment.
- *Level IV*: Opinion of respected authorities based on clinical experience, descriptive studies or a report from an expert committee.

However, researchers have been criticized for assuming this hierarchy is relevant to all systematic reviews (Petticrew and Roberts 2006). If a review is attempting to understand *why* a particular intervention works, rather than *what* interventions work, then other research designs, including qualitative studies, are likely to provide more relevant data (Dixon-Woods et al. 2001; Petticrew 2001). The key thing is to make sure that the quality of study designs is addressed in any analysis. Petticrew and Roberts (2006) provide a useful overview of the value of systematic reviews in the social sciences. Guidelines on judging the quality of qualitative studies in systematic reviews are now available (NHS CRD 2001; Thomas et al. 2004).

A specialized technique in systematic reviews is the use of a meta-analysis where the results from studies identified in a literature search are reanalyzed and reinterpreted. The use of statistical techniques can account for differences in quantitative methods and enables the researcher to pull together the findings of numerous studies to offer a more substantive assessment of the available evidence. This is particularly useful when studies are based on a small sample. However, meta-analysis is a highly sophisticated tool and should only be undertaken by researchers with statistical skills. The *NHS Centre for Reviews and Dissemination at York* (www.york.ac.uk/inst/crd) provides useful guidelines for those wishing to undertake a systematic review. It explains the various statistical techniques that should be utilized.

The key source for identifying systematic reviews is via the *Cochrane Collaboration*, an international network of those working on systematic reviews (www.cochrane.co.uk). Its website includes a searchable database. The *National*

Research Register also provides information on ongoing systematic reviews (www.nrr.nhs.uk). The *TRIP (Turning Research into Practice) Database* of evidence-based articles covering medical science may also be searched (www.tripdatabase.com). In addition, specialist publications such as *Bandolier* are indexed by the major abstract and indexing journals.

CARRYING OUT A LITERATURE SEARCH

This section outlines good practice in how to undertake a literature search: that is, how to set search parameters; identify appropriate databases; write the search strategy; and record the results (for further guidance see Gash 2000). In a sense, literature searching is like detective work – the aim is to identify the most appropriate sources to answer a question within a field of study. The key sources used by information specialists are listed below:

- ***Bibliography*:** A bibliography is a list of publications relating to a particular subject area. Various types of bibliography are:
  - *General bibliographies*: The *British National Bibliography* is a weekly publication from the British Library of all new books published in the United Kingdom and should be checked regularly.
  - *Specialist subject bibliographies*: Produced by research centres, scholars or specialist information services such as the *US National Library of Medicine*. This publishes *Current Bibliographies in Medicine* bringing together references on specific issues, such as health literacy (Zorn et al. 2004).
  - *Publications*: Journal articles note the works the author has quoted in a list of references at the end. Research monographs and textbooks will also provide a list of sources but will often include all items read by the author rather than just those quoted in the text.
- ***Catalogues*:** Most academic libraries and specialist institutions maintain a catalogue that shows the details and location of all items in stock. This is the most obvious place to start any search. *COPAC* (www.copac.ac.uk) is the merged catalogue of a number of university libraries and the British Library and national libraries of Scotland and Wales. Most other libraries make their catalogues available over the Internet and all academic libraries have reciprocal access arrangements for students.
- ***Abstracting and indexing journals*:** An abstract is a short summary of an academic journal article. This is an aid to assessing relevance without reading the full article:
  - *Abstracting journals* provide details of articles drawn from a range of journals within a particular subject area. They tend to be arranged alphabetically by author, with a subject index to locate relevant papers.
  - *Indexing journals* are usually arranged in subject order and provide basic bibliographic details of articles (title, author, journal, date, volume, page number).
  - Most abstracting and indexing journals are now available electronically on specialist databases.

The Internet and electronic sources have made the search process quicker and broadened the range of sources that can be accessed. This can be a problem as an overwhelming number of potentially useful articles may be retrieved. It is imperative, therefore, to plan a search effectively, and to review the strategy as the search progresses.

Library catalogues allow searches based on author, title, subject classification and keyword. Subject codes are assigned to books and other publications using classification schemes such as the Dewey Decimal System. The majority of classifications systems are based on numeric codes. For example, in the Dewey System, books on the medical sciences are located at 610. In addition, most cataloguers apply keywords to publications. The classification of articles in electronic databases is more sophisticated and has a higher degree of specificity than items in library catalogues. In other words, database searching can be more precise and retrieve more items of relevance as they are coded in more depth. A number of subject headings are assigned to summarize the coverage of each article. For example, the *US National Library of Medicine* uses MeSH (Medical Subject Headings) in the *Medline* database. In addition, databases assign keywords to each item drawn from the abstract or provided by the author. Some databases also make abstracts searchable. A keyword or abstract search can be a useful way to narrow down the focus of a search.

The reviewer may use various sources to identify the best database to search. Most academic libraries produce guides to the subject areas they cover and list the databases they subscribe to. It is usually possible to check where journals are abstracted and indexed on the publishers' websites, although no one database will cover all journals within a subject area. Databases are generally free at the point of use for students. If a library does not subscribe to a particular database, it may be possible to gain access on a pay-as-you-go basis. Table 3.1 summarizes some of the main subject databases covering health care. In addition there are numerous specialist databases such as *AgeInfo*, *PsycINFO* and *Alternative Medicine* which focus on particular sub-specialities in the health care field.

How to set the search profile

While it might be tempting to start immediately entering search terms into databases, an effective literature search requires careful planning. The reviewer should begin by setting down on paper a brief title for the review; a summary of the areas of interest, including the type of evidence and publications required; and any parameters for the search such as the date or language of publication. A search profile serves two key purposes. First, it requires the researcher to clarify the scope and parameters of the study and, second, it acts as an *aide-memoire* throughout the search process. In this way, the searcher is encouraged to remain focused and not be side-tracked down interesting but

Table 3.1 *key databases in health care*

Database	Scope	Content	Years
General:			
Applied Social Sciences Index and Abstracts	Health, social services, psychology, sociology, economics, politics, race relations and education International in scope	Indexes and abstracts 650 journals	1987–
International Bibliography of Social Sciences	Anthropology, economics, politics and sociology. International in scope	Bibliographic references to journal articles. Abstracts and some full-text access are provided. Includes research notes, responses and short essays, book reviews and book chapters	1951–
ScienceDirect	Science, technology and medicine full text and bibliographic information International in scope	Bibliographic details abstracts from the and 2,000 journals published by Elsevier. Includes access to full text	
Health:			
Cumulative Index to Nursing and Allied Health Literature	Nursing, allied health, biomedicine, alternative/complementary medicine, consumer health and health sciences librarianship. International in scope	Bibliographic references from 2,593 journals of which 1,831 are currently indexed. Abstracts are also provided for about 1,000 journals. Includes a citation index from 1994	1982–
Health Management Information Consortium	Clinical medicine; behavioural and social sciences, management and hospital administration. International in scope	Bibliographic references and abstracts from three institutions: the United Kingdom Department of Health and Nuffield Institute for Health (Leeds University Library) and King's Fund Library	1983–
Medline	Medicine and health policy. International in scope	Bibliographic references and abstracts. Some links to full text	1950s–

irrelevant byways. Narrative reviews offer more temptations to the unwary researcher. Systematic reviews usually set explicit inclusion and exclusion criteria. For example, according to Gash (2000) and others, the search profile for the study funded by the Office of the Deputy Prime Minister in the United Kingdom on the effects of overcrowding on health and education, which was used to structure the literature search process in the final report for this project, was as follows:

- *Sources*: Academic and policy databases, websites of key research organizations, charities and government departments.
- *Country*: Organization for Economic Cooperation and Development (OECD) countries.
- *Keywords*: 'overcrowding', 'crowding', 'houses in multiple occupation', 'health', 'physical health', 'mental health', 'child development', 'academic achievement', 'educational attainment' and 'deprivation'.
- *Known references*: Marsh, A. et al. (1999) *Home Sweet Home*. Bristol: The Policy Press; Thomson, H. et al. (2001) 'Health effects of housing improvement', *British Medical Journal*, 323: 187–90.

The scope of the review – which covered work in English, the academic literature (excluding newspaper articles and policy reports) and the period from the 1970s onwards – was as set out below:

- *Health impacts*: For example, mental health and infectious disease.
- *Educational consequences*: For instance, attainment and child development.
- *Empirical and conceptual studies*: Studies other than publications that merely report on levels of overcrowding in particular areas.
- *Adopt a snowball technique*: Read reference lists in articles and books for follow-up. Citation search of key articles to identify other potential sources of data.

Writing the search strategy

While the search profile provides an overview of the scope and parameters of the search, it is the search strategy that is actually used to retrieve journal articles and books from databases. The strategy requires the identification of the terms that best describe the area of interest. These can be found in the definitions provided in subject-specific dictionaries and encyclopaedias. This list should include synonyms, abbreviations and related terms. As most databases have an international scope, researchers should allow for possible variations in language. For example, while United Kingdom authors use the word 'overcrowding' in relation to overcrowded housing, North American authors tend to use 'crowding' to describe the same phenomenon. Browsing the subject index of the database can ensure that

the most appropriate words are searched for. It may also be worth checking how a key reference has been indexed in the database to see what subject terms and keywords were used to catalogue the article.

Once a list of search terms is identified, a search strategy must be written by deciding how these terms should be entered into the computer. It is rare that a search can be completed by inputting one or two words. Often the search strategy is built using Boolean operators – 'and', 'or', 'not' – which can be used to combine search terms to retrieve the most relevant articles. These three simple words can be used to broaden or narrow the search. For example, using the 'or' operator ensures that synonyms for the chosen term can be searched; the 'and' operator provides a narrower focus; and the 'not' operator ensures that records with this term are not retrieved. Prior to entering the strategy in the database, it is important to check how the Boolean operators should be entered. Some databases use symbols rather than words. Table 3.2 provides working examples of how Boolean operators were used in the overcrowding and health review.

Refining the literature search

Always be prepared to rethink the search strategy in light of the results. The search may retrieve too many results. A useful technique is to download or print out the complete references (or a sample of them) – together with the abstract and subject classifications – and use these to identify the relevant articles. The enquirer should look to see how these have been catalogued and refine the search strategy. If this does nothing to reduce the numbers, then limits such as date, language or place of publication should be applied. Most, if not all, databases offer on-screen help or prompts for this. More recent articles are likely to give a summary of previous research, and from these it should be possible to judge how far back the search needs to be taken. With luck, the search may identify an earlier review article which can be updated. If there are still too many references, then the focus of study will need rethinking in order to narrow the search further.

Conversely, searches may end with no results, or very few. This could be because little has been written on the subject, or may be due to inconsistencies in cataloguing and indexing on different databases. Each database will have its own house style so differences may occur in subject and keyword classification or in the logging of bibliographic details such as the author name. For example, in any database the name of the author could be indexed as *Jones, K*; *Jones, K.L.*; *Jones, Kathryn* or *Jones, Kathryn L*. So an author search for *Jones, K.L.* in one database may come back as having no hits, because papers are listed in the author index under *Jones, K.* Most databases offer the possibility of browsing the author index or to search for the surname alone. In the case of a common name such as Jones, this should be combined with a subject term to narrow the search focus.

Table 3.2 *The use of 'and', 'or', 'not' in a search strategy*

	Search	Outcomes	Uses
	Using the **AND** operator:		
1	Overcrowding		
2	Asthma		
3	1 and 2	Records that contain both 'overcrowding' and 'asthma'	Narrowing the focus of the search by including particular terms
	Using the **OR** operator:		
1	Overcrowding		
2	Crowding		
3	1 or 2	Records that contain either 'overcrowding' or 'crowding' or both terms	Ensuring synonyms are including in search strategy
	Using the **NOT** operator:		
1	Overcrowding		
2	Trains		
3	1 not 2	Records that contain 'overcrowding', but not 'overcrowding' in 'trains'	Narrowing focus of search by excluding particular variables

Keyword searching may not retrieve results because different authors may assign different words for the same phenomena. For example, some academics may use 'patient group', 'self-help group' or 'health consumer group' to describe similar types of organization. Or cataloguers could use the same word to describe different phenomena. For example, 'complaint' may mean an illness or an allegation that something has gone wrong. In addition, different cataloguers may code the same article under different subject headings. Most databases give the option of truncating search terms, by using a particular symbol (usually $) to retrieve more references. For example, a search on 'consum$' would retrieve articles on consumers, consumerism and consumption. It is essential to browse both subject and keyword indexes in databases. Recognizing that inconsistencies can occur ensures a healthy scepticism of retrieved results. A quick way of testing the results is to look at a journal reference list on a topic to see if at least some of the same articles are cited.

Another technique is to search for who has quoted an important journal article as this can help to snowball the search to ensure a comprehensive coverage. The *Science* or *Social Science Citation Index* allows the researcher to identify articles, and, increasingly, also books and book chapters that have cited a particular reference. This provides access to further work on the subject, and gives an indication of how others view this work.

The literature within a particular subject area is never static, so it is essential to build in a mechanism for keeping a search up to date. Some databases will save searches that can be rerun later. Many libraries and institutions produce a current awareness service of publications. For example, the *King's Fund Information and Library Service* (www.kingsfund.org.uk) specializes in health policy and economics and publishes a bimonthly current awareness service. The latest versions of journal content pages are produced by zetoc *Alert* email service (www.zetoc.mimas.ac.uk).

Searching for grey literature

Grey literature refers to literature published independently by, for example, specialist research units rather than mainstream publishers. The *Aslib Directory of Information Sources in the UK* is a useful starting point for identifying specialist collections. Grey literature may be difficult to obtain, but can be extremely valuable as it can include cutting-edge research. Some research bodies such as the *King's Fund* or the *Institute of Health Services Management Research* in the United Kingdom have websites that list, and increasingly provide, their publications online. It is also worth looking at the websites of research funding bodies such as the *Economic and Social Research Council* (www.esrc.ac.uk), the *Medical Research Council* (www.mrc.ac.uk) or the *Department of Health* (www.dh.gov.uk). Some research reports are available electronically. There are also various specialist indexes that cover particular types of publication such as conference papers, dissertations and official documents. These may provide access to information that has not been formally published. In the overcrowding study, grey literature was identified through hand searching specialist journals, specialist indexes and the websites of key research units and housing charities.

Although it is tempting to rely on Internet search engines to locate information in relation to grey literature and other material, it is important to remember that this does not substitute for properly constructed search strategies using specialist databases. First, a search engine will not search with the same degree of rigour as an online database. Second, some literature found on the Internet may look official but it may be inaccurate and unverified by external experts.

Recording the search

The type and extent of information provided on the results of the database search will vary according to the database publisher. Most databases provide options for how results can be viewed online. At a minimum, the bibliographic details (such as author, date, title, journal, volume/issue number and page number(s)) will be provided for each item. The majority of databases will also provide the abstract and subject classification. An increasing number now offer access to the full article. It is worth downloading or saving the bibliographic and abstract details of the search into an email account or some form of specialist software, so they can be looked at more comprehensively at a later stage. The database will generally offer prompts to achieve this. It is vital to keep track by noting the databases searched, the years covered, the number of retrieved articles and the search strategy used, to ensure that the search is undertaken as systematically as possible. This record will also be useful if the search strategy needs to be revised.

The bibliographic details and abstract of each item retrieved should provide a good indication of whether the full article is worth reading. If a journal or book is not available locally, it can be obtained via interlibrary loans. For each item read, the reviewer should complete a data extraction form and this is used to summarize key details from the item, as set out in Table 3.3. The type of information logged will depend on the purpose of the review, but keeping a record is essential. In the example given at the end of the chapter, the bibliographic details necessary for referencing are noted as well as information on definitions of keywords; the concepts that make up the conceptual framework; the findings or results of the study; the argument put forward; and the conclusions drawn. The form also provides space for personal comment, and a prompt for a rating of the quality and relevance of the paper.

For the literature review on overcrowding, a more complex form was devised that recorded details about the type of study and the methods used. It also included stricter guidelines for judging the quality of the papers (see Brown et al. 2004). Completing a form for each item may seem cumbersome, but is essential. A number of sources are likely to be identified and it will be impossible to remember everything that has been read. When planning and writing the review, it is less time consuming to read through one-page summaries than to reread every article. A useful tip in completing the form is to put the page number beside each new sentence. This is an aid to checking information or obtaining a page number if a direct quote is used. Some people suggest that this process should be computerized. However, unless the researcher is working at PhD level, or it is a long-term project, or a large amount of material is identified, a paper-based method should suffice.

Box 3.3 *A data extraction form*

Article no:		Review date:			
Title:					
Author(s):		Publication date:			
Publisher:		Place of publication:			
Journal:		Volume:	Number:	Page no:	
Keywords/definitions:					
Conceptual framework:					
Findings/argument:					
Author conclusions:					
Own notes:					
Rating: quality of research			Rating: relevance to study		
A	High quality		1	Extremely relevant	
B	Medium quality		2	Quite relevant	
C	Low quality		3	Marginal relevance	

Assessing relevance and quality in a literature review

A major part of the literature review will involve making a judgement on the relevance of what is being read. The significance of the findings to a project should be assessed as well as the effect of the research design on the outcome of the study. Once a number of studies have been read, it should be possible to make an accurate assessment of the importance of each item extracted.

Even within a narrative review an attempt must be made to judge the relative merits of the methods employed in each study. For example, a study rated as highly relevant may be based on only a small sample. A researcher may use this to make a case for a larger study. Alternatively, a search may identify issues that were explored using quantitative methods but there may be a benefit in further investigation using qualitative methods, and vice versa. The reviewer should comment on the reliability and validity of the methods used, and the extent to which they can be generalized to a larger population. It is also important to note whether findings support or contradict previous research.

A number of guides are available which describe approaches to evaluating different types of research in the clinical and social sciences. These have been developed for researchers wishing to undertake a systematic review. However, they raise questions pertinent for any review (see for example Greenhalgh 1997; NHS CRD 2001). The key questions for assessing the quality of studies in a literature review are summarized as follows:

- Conceptual framework:
  - Are the aims clearly stated and research questions clearly identified?
  - Does the author link the work to an existing body of knowledge?
- Study design:
  - Are the methods appropriate and clearly described?
  - Is the context of the study well set out? Did the research design account for possible bias?
  - Are the limitations of research explicitly identified?
- Research analysis:
  - Are the results clearly described, valid and reliable?
  - Is the analysis clearly described?
- Conclusions:
  - Are all possible influences on the observed outcomes considered?
  - Are conclusions linked to aims of study?
  - Are conclusions linked to analysis and interpretation of data?

WRITING THE LITERATURE REVIEW

A literature review is not simply a regurgitation of who said what on a particular subject. A successful review is an interpretive piece of work that offers an assessment of the quality and scope of existing studies in a particular subject area. It brings together what is known in order to state what further research or analysis is required. In essence, a review acknowledges what has come before and how this can be built upon and expanded.

The review should define the key concepts to be used in the research and how these will be used within the reviewer's own work. It is good practice to draw attention to different definitions of key terms and why the researcher has decided to follow one definition rather than another. For example, the term 'consumer' is contested; different authors attach different meanings. In the study of health consumer groups attention was paid to explaining why this term was used rather than 'patients' group' or 'patients' association' or 'health user group' and chosen by discussing debates in the literature (Baggott et al. 2005).

In discussing the theoretical framework for a study, the researcher must justify why a certain theory has been adopted and spell out what research questions are raised by this approach. Some studies use a number of theories, a strategy termed by Sabatier (1999) as a 'multiple-lens' approach. For example, in the health consumer group study, the research team drew on a number of different theoretical perspectives that raised different questions to assess the influence and impact of health consumer groups on the policy process. These included theories about the configuration, and relative power, of various structural interests in health care; explanations of the power and influence of particular pressure groups; and theories about issue networks and policy communities within the policy process. Theories of representative and participative democracy were also reviewed in the context of questions about how health consumer groups represented their members, and how representatives were seen by health care stakeholders. These theories informed the questionnaire design, the semi-structured interviews with health consumer group leaders and contributed to developing a theoretical framework for subsequent analysis of the qualitative data.

A literature review should also report on previous empirical work undertaken, what methods have been adopted and relevant findings. In the study of health consumer groups, previous work on patient groups and patient and public involvement in policy making at local and national level provided the basis for identifying gaps in the research. In addition, factors that limited the validity or generalizability of previous research findings were noted.

Deciding a structure for the literature review

One challenge for the researcher is to select the most relevant articles for inclusion from a large quantity of material. The basis for inclusion in the narrative review is the relevance of the conceptual, theoretical and methodological approach taken by different authors to the study in question. A second challenge is to find a logical structure in writing the review. This will depend on its purpose. A review that seeks to assess the evidence base for a particu-

lar health care intervention will be structured differently from a review for a dissertation, thesis or project. Thus, for example, the overcrowding review took a themed approach. In the introduction, issues relating to definitions and methods were discussed. Subsequent chapters reported evidence on the impact of overcrowding on various aspects of health (such as the higher incidence of respiratory illness) and education (like the effect of overcrowding on educational attainment).

It would be unusual to follow a simple chronological arrangement in the literature review, by for instance starting a discussion with the earliest work on the subject and ending with the latest. A review is more likely to be arranged according to themes drawn from the literature or framed around certain research questions. Within a narrative review, the reviewer should take care to ensure that the structure follows the logic of their argument. In effect, the reviewer aims to establish that a gap in knowledge exists and suggests a way forward, through further research (see Hart 1998).

Effective planning is essential in order to identify the most logical structure. Before writing, an outline or plan of the review should be written. This will involve jotting down the key themes identified from the reading and making links between them to establish an appropriate order. It is helpful to identify headings and subheadings. These may not be used in the final review but can help to ensure a logical flow to the argument.

Style and referencing in a literature review

The writing style adopted in a review will depend on what is being reviewed. One benefit from reading widely around a subject area is to gain a feel for scholarly writing. Sentences commonly used to develop an argument are summarized below:

- *Where there is agreement and disagreement on particular issues*: 'While there is general agreement that this has occurred (references), there has been some debate about whether this is due to x (references) or y (references).'
- *On the criticisms levelled at particular studies*: 'Jones's work has been criticized because of a, b, c (references), but it is of relevance to this study because it suggests x, y, z.'
- *Offering suggestions of what can be surmised or understood from the literature*: 'In summary, it is possible to suggest that x is related to y; however, what is still not known is how z fits into this, which is the purpose of the study.'

A review will go through several drafts. Early drafts are likely to be more descriptive than analytical as the reviewer must first decide how the literature

fits together before they can present a coherent argument. As the argument develops, the literature can be revisited. The extraction forms will be invaluable at this point to identify key findings. Articles that contradict findings, or question theoretical or conceptual frameworks, are also important. A good review offers a balanced perspective.

It is not necessary to cite or quote every reference retrieved, only those that are relevant to the question. The primary aim is to construct a clear narrative and to distinguish the author's argument from the works referenced. In deciding what to include, the researcher should bear in mind the intended audience. For example, a supervisor or external examiner will already have general background in the subject area. The literature should be analyzed with reference to the research aims or questions. A common mistake is simply to describe the literature – the approach must be analytic and critical.

Correct attribution is also important. Failure to acknowledge a source can lead to an allegation of plagiarism. For dissertation or research students, a preferred citation style may be recommended. One common style is the Harvard system – as used in this volume – based on an author and year system, with fuller details listed in alphabetical order at the end of the work. Another style is the Oxford system where numbers for each source are used in the text and then full bibliographic details are given in a footnote or endnote. Legal or historical texts tend to favour page footnoting as readers may wish to see precise amplification as they read. If guidelines are provided by a book publisher or editors of a journal, they should be followed to the letter and consistently applied. Moreover, if a source is quoted directly, it should always be cited and the page number given. If particular ideas or arguments are summarized, this should also be acknowledged. Chapter 21 discusses writing style further.

CASE STUDY

Case study The Black Report

In 1977 the Secretary of State for Health and Social Security requested a review of existing knowledge on the differences in health status between social classes, their causes and implications for policy and future research. The review was chaired by Sir Douglas Black (then Chief Scientist at the Department of Health and Social Security, and later President of the Royal College of Physicians). This hard-hitting report on the evidence of inequalities in health (Department of Health and Social

CASE STUDY

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Security 1980) was finally made more widely available by Townsend and Davidson (1988) and subsequently has been updated in the light of further evidence. The aim was to provide evidence of the extent of inequality in health and offer an assessment of its implications. The report reviewed the following:

- *Concepts of health*: How is health, ill-health and inequality defined?
- *Concepts of health and inequality*: Definitions of health, indicators of health and illness including disablement, inequality indicators based on occupational group, income and expenditure.
- *Theoretical debates*: What theoretical approaches can explain why health inequalities occur?
- *Empirical evidence*: The sources of evidence on health inequalities, for example the statistical returns from the General Household Survey, birth cohort studies and published reviews of data.
- *The pattern of present inequalities*: Mortality by gender, race, region, occupational class, incidence of common illnesses.
- *Trends in inequality of health; inequality in the availability and use of the health service*: *A r*eview of published studies and critique of methods.
- *International comparisons*: Comparison with developed countries, particularly European countries.
- *Towards an explanation of health inequalities*: Theoretical approaches to understanding health inequalities were assessed against the human life cycle.
- *Recommendations*: These outlined (a) the need for further primary and secondary research on particular issues and in policy terms; and (b) the need for a comprehensive anti-poverty strategy covering a range of social services based on a broader concept of inequalities in health.

CASE STUDY

Case study Carrying out a literature review for a short paper: Health consumer networks and alliances

This review was undertaken for a chapter in a book by Baggott et al. (2005), entitled *Speaking for Patients and Carers*, on health consumer groups in the national policy process and was funded by the Economic

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CASE STUDY

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and Social Research Council (RO00237888). The chapter formed a link between the early part of the book, which had set out research into the general conceptual, theoretical and policy context and explored the characteristics and social and political resources of health consumer groups, and the later chapters which dealt with the relationships between such groups and other actors/institutions in the policy process. The aim of the chapter was to explore how and why contacts and links between health consumer groups formed; how these alliances supported these groups' role in policy; and the factors that encouraged collaboration rather than competition. The issues were identified as:

- *Conceptual issues*: How are networks and alliances defined?
- *Theoretical debates*: How can alliance working in the policy process be understood and explained?
- *Empirical evidence*: What evidence exists on current patterns of alliances and networking within the health consumer group and the voluntary health sector?

CONCLUSION

This chapter has emphasized the importance of the literature review in identifying concepts, theories and existing empirical studies on a particular phenomenon in the early stages of developing a research proposal or project. This enables a researcher to build on the basis of existing knowledge and on what other scholars have achieved, but also to identify gaps in the literature and to identify interesting new questions. While systematic reviews are a specialized form of study, narrative reviews are fundamental to any project.

The Internet has brought access to a vast range of electronic sources for the researcher. A well-written review will provide enough background to bring the reader up to speed in the subject area and give them a framework within which to assess the evidence. In order to navigate a way through the quantity of sources available, two strategies may be employed. First, it is important to plan a search strategy carefully and to record sources and their content meticulously. The chapter outlines ways in which this can be done, so that with practice, the researcher can be

quick and efficient at finding the sources most likely to be relevant to their research question. Second, the expansion of the Internet has led to the increase of information specialists who are employed by many organizations, and not only higher education institutions, to assist people in gaining access to information and what they need to know. This is particularly the case in the health field where a wide range of people, both professionals and the lay public, now wish to inform themselves better using both national and international sources. An exercise now follows for readers further to develop their understanding of this chapter.

Exercise: A literature search on New Labour's expert patients agenda from a consumer/citizen perspective

The following exercise provides an opportunity to think through the process of developing a search strategy and a structure for a literature review. While the subject area may not be one you are familiar with, the process described in this chapter should give you a framework to plan a successful search.

Think about the type of literature review that you would undertake for a dissertation entitled 'A critical analysis of New Labour's expert patients agenda in the United Kingdom from a consumer/citizen perspective'.

1 What conceptual and theoretical issues will you need to consider?

- Consider what definitional issues you will need to address.
- How will perspectives on consumerism/citizenship influence the analysis of the literature?

2 Which electronic databases will you need to search?

- Consider the scope and coverage of the database. How important is it that it is international in scope?
- Are you going to attempt to identify primary research studies, secondary policy analysis or both?

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3 What search strategy will you build?

- Consider what keywords and phrases you will need to use.
- Consider what the most appropriate limits might be for your search – for example, language and date of publication.
- Are there any terms that can be truncated to broaden the search?

4 What will be the most relevant sources of grey literature?

- Which key research organizations may have an interest in the Expert Patients Programme?
- What information will you need to obtain from the Department of Health website?

5 What key data will you need to log from the literature?

- Consider how these may change according to the type of information — for example, policy documents, policy critiques and policy analyses that draw on field research.

6 How will you structure the review?

- What information will the reader require on the Expert Patients Programme?
- What information will the reader require on the theoretical and conceptual issues underpinning your review?
- Will you tackle the advantages/disadvantages of the Expert Patients Programme separately or by theme?
- Will you discuss primary and secondary research together or separately?

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RECOMMENDED FURTHER READING

Gash, S. (2000) *Effective Literature Searching for Research.* Aldershot: Gower.
This is an excellent, easy-to-understand guide for students and other researchers on the process of planning, executing and recording a literature search, covering both print and electronic sources.

Hart, C. (1998) *Doing a Literature Review: Releasing the Social Science Research Imagination.* London: Sage.
This book provides a comprehensive guide to the process of accessing, analysing and understanding the arguments presented in academic texts, giving useful advice on how the literature review fits into undergraduate and postgraduate dissertations.

Petticrew, M. and Roberts, H. (2006) *Systematic Reviews in the Social Sciences*. Malden, MA: Blackwell.
This highlights how systematic reviews of research evidence are becoming increasingly important in the social sciences, much of which is also relevant to narrative reviews as well.

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