PART I

Conducting Health Research
Introduction

The Context for Researching Health

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INTRODUCTION

This specially commissioned, edited book aims to provide a guide to the range of ways in which readers may approach researching health in practice. After the opening chapters on conducting health research (Chapter 1 to Chapter 3), each of the mainstream chapters on qualitative and quantitative methods and health (Chapter 4 to Chapter 14) gives an account of a specific research method in health or how to research a particularly significant specialized area of health care. In the case of research methods, the type of questions that the method is intended to address and its strengths and weaknesses are described, followed by a consideration of the challenges likely to be encountered in carrying out research. The book then turns to consider selected contemporary debates about the best ways of researching the health field which also to varying degrees draw attention to the use of mixed methods (Chapter 15 to Chapter 20). In so doing, each chapter in the book provides examples of health research in practice to aid readers in carrying out their own research project or in using the research of others in their work. These examples include those from the authors’ own research, as appropriate – which is also reflected in the concluding chapter by the editors on the dissemination of health research (Chapter 21).
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We take the view as editors that two principles underlie all research. First, research is about producing new insights and new knowledge by setting answerable research questions, collecting data in a systematic ways, analysing these intelligently and rigorously, as well as identifying patterns and establishing associations. In this way, researchers may contribute, amongst other things, to a greater understanding of individual health and collective health behaviour, the role and impact of health providers and the options for delivering health services to communities. In putting together the book, we believe that:

Research is about illumination. If we don’t succeed in that we have failed. If a person reads something and doesn’t feel any wiser, then why was it done? Research should fire curiosity and the imagination … If people feel research illuminates their understanding and gets into their thinking, then it’s of use. (Quoted in Richardson et al. 1990: 75)

The second principle is that the findings produced by research are always contingent on the context in which the research is carried out, the methods used and how the data has been analyzed and interpreted. We therefore think that it is incumbent upon the researcher to be as explicit and transparent as possible about these elements in the research process. New knowledge or insights occur in small steps. Often, studies need to be replicated and/or reanalyzed and revisited before findings can be said to be soundly based. All research results are subject to reinterpretation and review. In this sense, the production of new knowledge is a collective enterprise and each researcher, even if working alone, is part of a wider research community. Although there is no single organization that covers all researchers in health and/or other fields, there are both formal and informal rules that govern research. These are outlined and assessed in the various chapters in this volume.

WHAT IS HEALTH RESEARCH?

What, though, is ‘research’ in the health context? At its most general level the conventions of health research can be viewed as work conducted to develop knowledge based on available evidence, following certain rules and procedures. However, as Henn et al. (2006) point out, what is to count as knowledge and how we acquire that knowledge is a contested area. Most significantly, there are different paradigms or clusters of beliefs and assumptions that shape what is studied, how research is conducted, what methods are used to ground knowledge and how results are interpreted. These frame how we view the
world and lead to many different types of research. They are more fully dis-
cussed in the next chapter and also by Brown et al. (2003).

At a macro level, there is a division between research in the natural sciences
(including, for example, physics, chemistry and biology), on which the more
clinical areas of health research tend to be based, and the social sciences (such
as policy, politics, history and sociology) that explore patterns of health and ill-
ness and the social meanings surrounding these. At a micro level, there are also
distinctive approaches both between, and within, such disciplines and sub-
disciplines (Daly et al. 1992). There are distinctions too between the various
methods used in health research that are divided broadly between qualitative
and quantitative research. Classically, these are based on the paradigms that
provide a philosophical and methodological context for such work in the health
field (Dyson and Brown 2006). However, as some of the chapters in this book
illustrate, many research projects are now carried out using a mixture of meth-
ods. In these circumstances, it is vital for the researcher to understand what
kind of knowledge each type of method produces, what kind of evidence sup-
ports the interpretation of findings from research data and how different kinds
of evidence may or may not be linked together to determine how a particular
piece of research adds to knowledge.

According to Richardson et al. (1990), within the broader frame of reference
delineated by paradigms, health research itself can take many different forms
based on the purpose of the research and its subject matter. These principally
include the following types: contextual/descriptive, diagnostic/analytical,
strategic, evaluative, developmental and methodological (see Table 1.1).

These types of research have different audiences. To illustrate this, contextual
research has broad appeal to academic and other communities, while strategic
research is of most interest to those concerned with policy and practice. The
varying forms of research also relate to various stages of a research project.
Thus, for example, methodological research is usually involved in establishing
the foundations for further research, while evaluative research typically looks
back on programmes already developed. In the health sphere, the methods
employed to collect data within these various types of research are wide
ranging – from surveys to observational techniques. A fuller account can be
found, amongst others, in Jenkinson (1997).

The notion of ‘health’ itself has been conceptualized in many ways. Turner
(2003) charts the manner in which the concepts of health and illness have
changed historically, from primitive societies where they were linked to spirit-
ual notions of purity and danger, to the dominant biomedical, scientific and
professional definitions that focus on disease and pathology. In the modern
context, though, as he notes, there are still many debates about interpretation.
Typically, social scientists view health as a moral norm defining a socially
constructed, prescriptive standard that tends towards an ideal of well-being or social functioning – although people in different social groups also define health very differently depending on such variables as social class, gender, ethnic group and age. Within this perspective, illness is usually conceptualized as the obverse of health, and as a socially sanctioned, but legitimated role – which may be further socially patterned through the interpretations of the individuals themselves and significant others, such as family, friends and health providers.

Within the natural scientific viewpoint, there has been a greater emphasis on the identification and classification of disease categories, and on the causes of mortality and morbidity, based on objective clinical pathology. This has led to considerations of how particular interventions can best treat diseases in individuals and to the epidemiological study of the incidence and prevalence of particular diseases in groups and communities – although epidemiology itself is a highly specialized area not covered in this book.

This latter point highlights that research on health, illness and disease can be focused at many different levels in the contemporary context: from the individual to the community, from the activities of patients as health producers to the contribution of informal carers, and from health care assistants with a short training to fully fledged health professionals in the labour force. Those concerned with health care may also operate at a local, national or international level. This is reflected in the range of research undertaken in the health field, as well as its differential applicability to aspects of government policy.

Table 1.1 Different types of research: a summary

Contextual or descriptive: Providing current information or intelligence on a problem – for example, the prevalence of Alzheimer’s disease

Diagnostic or analytical: Attempting an explanation of phenomena based on a notion of cause and effect – such as accounting for changes in the birth rate

Strategic: Discovering implications, assessing alternatives and finding solutions – as, for instance, in the analysis of those at risk from a universal vaccination programme

Evaluative: Assessing the benefits and costs of a specific programme or course of action to those directly concerned or the wider community – as illustrated by the testing of a new drug

Developmental: Studying the implementation of programmes to feed back information to enable change – for example, on an anti-smoking campaign

Methodological: Assessing methods and techniques and developing new ones – as in the case of finding new means to diagnose particular diseases

Source: Richardson et al. (1990)
RESEARCH FOR POLICY

From this viewpoint, we would emphasize that health research using a range of methods may be undertaken not only to gain an understanding of health, illness and disease in contemporary society, but also to contribute to policy development. In this regard, there has been a major change in the culture of health services in the developed world. Not only have clinical interventions become more evidence based, but policy makers too aim to base their policies on the interventions that are most efficacious. Recently, clinical science centred on a biomedical model of disease has made a considerable contribution to developing evidence for treatments based on clinical trials and experimental methods. This is witnessed by the establishment of the Cochrane Collaboration, for example, which has driven the growth of international centres for preparing, maintaining and disseminating systematic reviews in health care, typically based on randomized controlled trials (Lancaster et al. 1997).

In the United Kingdom specifically, since the 1997 general election, Labour governments have put an emphasis on the maxim ‘what counts is what works’ (Rawnsley 2001). In the clinical care arena, this is illustrated by such developments as the National Institute for Clinical Excellence (NICE) that produces clinical guidelines based on research evidence and National Service Frameworks (NSFs) that seek to develop a firmer foundation for clinical interventions (Brown et al. 2003). NICE includes a remit to reconsider the funding of interventions that are not effective. For balance, it also has a Patients’ Council with representatives of consumers and there is a network to support health consumer groups to submit evidence. NSFs, on the other hand, have set the parameters for a framework of policy priorities, in terms of which diseases and illnesses should have priority for funding, and what are considered to be the most efficacious interventions.

Both clinical and policy research have benefited from hitherto unprecedented levels of research funding to evaluate interventions and to carry out pilot projects. The Research and Development Programme directed by the Department of Health in particular has made substantial research funds available for work on policy priorities. However, there has been considerable debate and controversy about the validity and utility of the evidence base for clinical and policy guidelines on the efficacy of treatments and the appropriateness of the services provided; evolution has been fast and not all of these have been based on sound research evidence (Brown et al. 2003). There have also been differences of opinion about the balance between clinical and more social scientifically oriented research and the role of lay people in providing a perspective and form of knowledge distinct from those of health professionals, as well as about the ethical issues raised in health research (Gabe et al. 2006).
In this context, the main readership of this book is intended to be health researchers, academics working in the health field, health care managers, and health practitioners from doctors, nurses and midwives to pharmacists and physiotherapists – together with students on health programmes. In this latter regard, it is designed especially to appeal to those working on courses at a higher undergraduate and postgraduate level who are interested in health research. Although based predominantly on research undertaken in the United Kingdom, the aim has been to give the book an international dimension with contributors from other English-speaking countries such as Australia, New Zealand and Canada, as well as from a wider European context. This provides the reader with access to examples of health research undertaken in other countries. It also underlines the trend towards the globalization of health research, which has developed across national boundaries. We have acknowledged this as editors by including Chapter 20 that is dedicated to exploring how to conduct comparative health research by looking at single issues across countries. Although the comparative method presents many challenges, there is much to be learnt from policy and practice in other countries – not least in the health area where research can reveal that what appears immutable in any one country may be context specific and far from best practice.

The book has been planned to be clear, accessible and oriented to practice. It provides a distinctive overview in a critical, but constructive, manner of the research methods commonly used in health. This overview differentiates it from many recent books pitched at a variety of levels published on research methods both generally and more specifically (as exemplified by Argyrous 2005; Punch 2005; Silverman 2004). Unlike many texts in the health research field, the book also does not focus on a closely defined set of qualitative or quantitative research methods (see, for instance, Scott and Mazhindu 2005; Green and Thorogood 2004); specific groups of health practitioners (see, for example, Ernst 2001; McSherry et al. 2001); or particular practice contexts such as clinical hospital-based medicine or primary care (as illustrated by Earl-Slater 2002; Wilson et al. 2000). Instead, it discusses more expansively how health research methods can be applied and the issues that they raise. In appealing to a wider audience, this book also addresses a number of topical areas, some of which have become of increasing importance such as research ethics, using mixed methods in research, researching ethnic minorities, and comparative international research.

Despite its length, no single book can of course cover in detail all areas of health research. The references in each chapter, therefore, act as a guide to additional study, complementing the focused recommended further reading lists for each chapter. Contributors not only cover the technical issues related to
their areas, but also illustrate their accounts, with reference to their own personal experience of conducting health research, highlighting its pleasures and pitfalls. Each of the subsequent chapters contains case studies and concludes with a problem-solving exercise to encourage readers to demonstrate how theory, methods and data interrelate. In addition, chapters are cross-referenced to each other to assist readers in navigating the text.

As an edited collection with a consistent format, the book has the advantage of drawing on a range of contributions from leading experts in the field without losing coherence. It therefore provides a contribution distinct from, but complementary to, the widely used text by Bowling (2002) on *Research Methods in Health: Investigating Health and Health Services*, and its recently published companion volume edited by Bowling and Ebrahim (2005) entitled the *Handbook of Health Research Methods* which is designed specifically to enable researchers from different disciplinary backgrounds to work together.

In putting this volume together, the editors bring much experience of both writing and editing books on many aspects of health, applying research methods to health and receiving funding from bodies such as the Department of Health, the Economic and Social Research Council and the European Union. Recent projects include studies of using research methods in primary care, professional regulation, orthodox and alternative medicine, consumers in health care, and quality assurance in medical care (see, for example, Saks et al. 2000; Allsop and Saks 2002; Saks 2003; Baggott et al. 2004; Allsop and Jones 2006). They also bring experience of commissioning research and reviewing research protocols as well as evaluating research reports through their membership of a range of government policy and research committees. Their experience is complemented by that of the wide range of nationally/internationally recognized specialists in different forms of health research who have written the specific chapters that make up this text.

**THE ORGANIZATION OF THE BOOK**

The book has been organized into Parts and starts with Part I on conducting health research. Aside from Chapter 1 on the context for researching health by the editors, Mike Saks and Judith Allsop, it also contains two further building block chapters relevant to conducting all health research. Chapter 2 is written by Evan Willis and Alex Broom on competing paradigms and health research, which examines different methodological paradigms in the process of production of research knowledge – with a focus on outlining and evaluating the various dimensions of the more quantitative positivist and more qualitative interpretivist approaches. Chapter 3 is by Kathryn Jones on undertaking literature reviews in health, who considers the two main types of literature
review – the narrative and the systematic review – before going on to describe techniques for undertaking a comprehensive search, and giving guidance on how best to present an analysis of the literature.

Authors in the next two parts on qualitative and quantitative research methods were asked to give attention to why the specific research methods concerned should be employed, what kind of research questions could be addressed by the methods and how the data would be gathered using them – including data coding, analysis and presentation. The main areas that authors were requested to address in each chapter on research methods were as follows:

- Definition/elaboration of the research method to be considered.
- The rationale for employing the type of research method concerned.
- Examples of employing the research method in practice.
- Strengths and weaknesses of the research method in question.
- Resources required to apply the method in practice.
- Issues involved in the coding/analysis of data using the research method.
- The identification, writing up and presentation of the findings.

Within this framework, Part II on qualitative methods and health covers a broad span of chapters on research methods written by seasoned qualitative researchers in the field. Andy Alaszewski starts this part by examining in Chapter 4 the ways in which documents have been and can be used for health research – not least by describing the nature of documentary research, identifying the resource base needed, assessing the research issues for which it is most appropriate and considering how documentary data can best be analyzed. In Chapter 5, Jacqueline Low looks at parallel issues related to the increasing use of unstructured interviews including their advantages and disadvantages, the recruitment of participants and the techniques of both carrying them out and assessing and presenting the data that they produce. While a range of observational methods, including unobtrusive measures, are used in researching health, David Hughes in Chapter 6 provides a specific outline of, and justification for, the extensive use of participant observation in health research. Judith Green in Chapter 7 then considers the use of focus groups in research into health, examining various aspects of the employment of such groups, from their strengths and weaknesses to the resources they require and the ethical issues that they raise. The more general theme of action research in health is addressed by Heather Waterman in Chapter 8, who discusses some of the challenges of action research and how these difficulties can be overcome with positive effects on health and health care.

Part III on quantitative methods and health also draws on the experience of a range of well-established authors, this time in the quantitative area. It begins
with Chapter 9 from Peter Davis and Alastair Scott, which sets out the fundamental aspects of health sampling methods, with primary reference to probability sampling, drawing on a number of examples from the health field. Michael Calnan in Chapter 10 explains the nature of quantitative survey methods in health research, and describes how to go about using such methods. This chapter is linked to the previous one in so far as sampling is usually employed in conducting large-scale questionnaire surveys. George Argyrous in Chapter 11 clearly describes and evaluates a range of basic statistical methods to analyze the quantitative data deriving from these and other sources in researching health. The basic concepts and principles related to randomized controlled trials are then outlined by George Lewith and Paul Little in Chapter 12. Niro Siriwardena complements this contribution in Chapter 13 by selectively providing insights into experimental and quasi-experimental methods, which offer alternatives to the randomized controlled trial in health research. Alan Maynard in Chapter 14 completes this section by writing on the use of economics in health research, in which he sets out a research framework for appraising evidence on cost and effectiveness to inform difficult rationing choices in health care.

The next part of the book deals with a selection of topical issues in health research. Contributors consider a number of contemporary challenges to researchers working in the health field. In the context of the wide range of research methods discussed, they were asked to:

- Define the issues involved.
- Consider the advantages and disadvantages of different approaches.
- Outline how the issues can best be addressed.
- Illustrate these points with examples of their own work in the area concerned.
- Discuss the politics of the process of applying research methods in health in their field.

Accordingly, Part IV on contemporary issues in researching health begins with a discussion in Chapter 15 of the increasingly important area of governance and ethics in health research by Priscilla Alderson, who considers the merits of various approaches to ethics review and governance, including how ethical issues can best be addressed in health research. Jonathan Tritter in Chapter 16 then examines the advantages and disadvantages of mixed methods and multidisciplinary research in the health context, and also assesses their implications for research design and project management. Janet Richardson and Mike Saks in Chapter 17 go on to explore some of the issues involved in researching complementary and alternative medicine, as opposed to orthodox medicine, in which there is fast-rising public interest. In Chapter 18 Mark Johnson discusses in their wake the issues of health research involving minority groups – who span from
women to marginal religious groups – by writing on the illustrative case of ethnic minorities in a multicultural society. In such areas the participation of users in lobbying for particular causes can be very significant, so it is most appropriate that Sophie Hill next examines the nature and characteristics of consumer engagement in health research in Chapter 19. The part ends with Chapter 20 by Viola Burau on comparative health research, which points up the range of international challenges to health research and how these can be tackled.

Finally, the book finishes with Part V on Disseminating Research in Health. This consists of a single but substantial chapter on writing up research and getting published in the health field by the editors, Judith Allsop and Mike Saks. The initial section of this chapter emphasizes the importance of selecting an appropriate research question and method(s) to match and showing due sensitivity to the issues raised by the changing research environment for the effective dissemination as well as conduct of research in health. The chapter then highlights the range of skills involved in writing up health research, as well as the benefits and pitfalls of publication of this research in its many senses. However, given the energy and resources necessary to disseminate work in the health area, this concluding contribution – together with the other chapters – raises the crucial question of why we should research health in the first place.

**CONTEMPORARY THEMES IN RESEARCHING HEALTH**

In this volume, two strong substantive and interlinked contemporary themes emerge across a number of chapters. These are, first, the role of consumers or users in contributing to the research process and, second, the ethics of research in health. Consumers can contribute at all stages of the research process, from helping to determine topics for research to contributing to the publication and dissemination of research findings. Consumers are drawn into research in different ways in different projects. There are now usually both institutions and rules to ensure that patients give their informed consent to taking part in research and that they understand what will be involved, as well as rules to protect confidentiality. Nevertheless, there are still underlying issues about power relationships in the research process and debates about whether research is done ‘on’ or ‘for’ consumers. There are therefore powerful arguments in favour of trying to ensure that consumers are active participants in health research, although their involvement poses a range of ethical, scientific and administrative problems that are discussed at different points in this book.

One major methodological theme that runs through this text is that many current research projects use a mixture of methods and research is consequently often interdisciplinary. This raises issues of how data collected using
different methods can be analyzed and integrated into the whole. In many respects, this kind of approach sits uneasily with the traditional model of lone researchers pursuing their own interest and making a career and reputation based on individual publications. The final chapter of the text will assist singleton researchers, amongst others, in developing and presenting their work. However, there is no doubt that the form of research based on the work of teams – that often poses considerable management problems – is now a more typical setting for the career researcher. The concluding chapter and a number of other chapters in the book comment on this more collective way of working.

CONCLUSION

Research in principle, with some caveats, benefits those involved with health whether as provider, producer or consumer. This is a very good reason in its own right for conducting research into health. So too is the sheer exhilaration of engaging in health research that can further disciplinary and interdisciplinary knowledge, even where there is no obvious application. However, we note that the contribution of research has developed unevenly in practice. The prime beneficiary of funds for evidence-based research in the health service in the United Kingdom at least has been conventional hospital-based acute care, following the establishment and expansion of scientific medicine (Le Fanu 1999). In contrast, many areas from nursing (Witz and Annandale 2006) and primary care (Saks 2000) to complementary and alternative medicine (Saks 2005) have until recently been Cinderella areas. Nonetheless, this balance in the United Kingdom and elsewhere is beginning to change as governments worldwide invest more widely in health research and associated health policies.

We trust that this book will contribute in future to growth in both hitherto under-resourced areas of health research and health research more generally in this context. While opportunities for research are increasing, it is significant that the onus on researchers to produce robust results based on sound methods has never been greater. This will also be vital if researchers are to make a positive input to policy formation in the fast-changing health field locally, nationally and internationally. We hope that this book on researching health will assist in this critical process too, in shaping the health strategies and activities that lie ahead.
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RECOMMENDED FURTHER READING

This gives a clear description of a range of selected research methods and has been produced in a second edition to reflect new methodological developments.

This book contains a useful set of further readings, with the main aim of helping researchers from different disciplines work collaboratively in health research.

This introductory book highlights in an accessible manner the theoretical context underpinning applied research in the health care field.

REFERENCES


