The second edition of this book aims to provide an extended and updated guide to the range of ways in which readers may approach researching health. The volume contains a number of key enhancements. There are new chapters on gender and health research and public health research, and all the chapters have been updated with new material. There is more emphasis on mixed methods in health research and on research ethics. The chapters on qualitative and quantitative methods also now all contain sections on how to read and critically appraise published work using the methods concerned. This is in addition to other updates to the high quality chapters from the first edition of Research Health.

After the opening chapters in Part I of the book on how to conduct health research, Part II examines how qualitative methods have been used to research health, illness and the delivery of services in health care settings. In Part III, the quantitative methods used in health research to investigate health, illness and treatment for disease, and to assess the costs and benefits of interventions in health care, are discussed. In both these sections, the aim is to describe the use of various methods in practice; the type of questions each method is intended to address; and the strengths and weaknesses of each approach. This is followed by a consideration of the challenges likely to be encountered in carrying out research.

The book then turns in Part IV to consider selected issues in the field of health research that have emerged as under-researched areas, such as the health of minority groups and
issues of gender, and where current research practice has faced a critical challenge, leading to ongoing debate. Questions of how to ensure ethical research practice and how to involve those who use health care in the research process have become more central to health research, but are areas where opinion is divided. The interests of researchers may conflict with those people who are the subjects of research. Even if there is agreement that ethics is a central issue in health research, and that a partnership between researchers and health care users offers a way forward, there are still practical problems about how this can best be achieved.

The concluding chapters in Part V focus on applying health research, addressing specifically the issues of mixed methods and multidisciplinary research; the research process and writing up health research; and disseminating and using such research. Throughout the book, we have aimed to engage with the practical problems of conducting research. In so doing, each chapter provides examples of health research in practice — including those from the authors’ own research where appropriate — to aid readers in carrying out their own research project and/or in using the research of others in their work.

We continue to 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 way; analysing research questions intelligently and rigorously; and identifying patterns and establishing associations. In this way, researchers may contribute 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. (cited 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 have been analysed and interpreted. We therefore think that it is incumbent upon the researcher to be explicit and transparent about these elements in the research process. New knowledge or insights occur in small steps. Often, studies need to be replicated and/or reanalysed 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. It is fundamental to understand these as they frame how we view the world and lead to many different types of research. They are more fully discussed in Chapter 2.

At a macro level, there is a division between research in the natural sciences in areas such as anatomy, biology, chemistry, physiology and physics, on which the more clinical areas of health research tend to be based (see, for example, Foss and Farine 2007), and research in the social sciences like history, policy, politics, psychology and sociology that explore patterns of health and illness and the social meanings surrounding these (see, for instance, Garner and Christiansen 2008). At a micro level, it is important to note that 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 research (as illustrated by Bourgeault et al. 2010) and quantitative research (as exemplified by Bruce et al. 2008). Classically, these are based on paradigms that provide a philosophical and methodological context for such work in the health field (Dyson and Brown 2006). However, as a number of the chapters in this book highlight, many research projects are now carried out using a mixture of methods (Andrew and Halcomb 2009). In these circumstances, it is vital for the researcher to understand what kind of knowledge each type of method produces; what kind of evidence supports 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 depending on the purpose of the research and its subject matter. As can be seen from Box 1.1 below, these principally include the following types: contextual/descriptive, diagnostic/analytical, strategic, evaluative, developmental and methodological.

These types of research have different audiences. To highlight 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 foundations for further research. Evaluative research, in contrast, typically looks back on programmes already developed – and by definition provides evaluations of them. 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 in Jenkinson (1997).
CONDUCTING HEALTH RESEARCH

Conceptualizing Health: The Social and Natural Sciences

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 spiritual notions of purity and danger, to the dominant biomedical, scientific and professional definitions that focus on disease and pathology that affects the body and body parts. 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 we know that people in different social groups also define health very differently depending on such variables as social class, gender, ethnic group and age (Scambler 2008). Within this perspective, illness is usually conceptualized as the obverse of health. Social scientists have conceptualized illness as subjectively defined, socially sanctioned and legitimated. It is also socially patterned through the interpretations of individuals themselves and significant others, such as family, friends and health providers (see, for instance, Calnan 1987).

From a social science perspective, the types of study that have been carried out in the health arena from various theoretical viewpoints are very wide ranging. Psychologists, for example, who tend to focus on individuals and small groups, have considered subjects such as the hierarchy of needs (Maslow 1954), health and value systems (Herzlich 1973),

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Box 1.1 Different types of research: A summary

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

*Diagnostic/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 feedback 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)
INTRODUCTION

psycho-social factors and health (Cassileth et al. 1984), stress and health (Lovallo 2005),
health practitioner-client interaction (Purtulo 2007) and the role of psychology in specific
health conditions (Straub 2011). Sociologists, on the other hand, who focus more on the
broader study of social groups in society, have classically examined such topics as the sick
role (Parsons 1951), stigma and adjustment (Goffman 1968), the impact of wider structures
of power on health and illness (Navarro 1986), health and lifestyles (Blaxter 1990), inequali-
ties in health (Bartley 2003), the relationship between orthodox and alternative medicine
(Saks 2003) and health policy and governance (Kuhlmann and Saks 2008).

From a natural scientific viewpoint, there has been a greater emphasis on the identifica-
tion and classification of disease categories (see, for instance, Neighbors and Tannehill-Jones
2009), and on the causes of mortality and morbidity, based on objective clinical pathology
(as illustrated by Damjanov 2012). Such work focuses less on personal and social contexts of
health and more on the biomedical frame of reference – in subjects ranging from infectious
diseases (Török et al. 2009) to the implications of genetic structures for the disease process
(Panno 2010). Aside from enhancing our understanding of disease and pathology, this has
led to considerations of how particular interventions and technologies can best treat disease
in individuals (see, among others, Jass 1999) and to the epidemiological study of the inci-
dence and prevalence of particular diseases in groups and communities, not least to facilitate
prevention (see, for example, Buettner and Muller 2012) – a subject which is covered in
more detail later in this book.

The sciences as more broadly defined, including areas such as economics and statistics
as well as more overtly clinical science subjects defining outcomes, significantly underpin
health service research that looks at the relationship between the provision, effectiveness
and efficiency of health services – as, for example, in relation to surgical interventions
for coronary heart disease (Bowling 2009). However, like epidemiology, health service
research is genuinely multidisciplinary and is also based on the social sciences. This is well
illustrated in terms of health outcome measures. These have traditionally tended to be
centred on indicators of morbidity and mortality and physical functioning, drawn from
the biomedical sciences. Increasingly now, however, they are focused on wider indicators,
such as social functioning, patient-perceived health status and quality of life (Kane and
Radosevich 2011).

This outline indicates that research on health, illness and disease can be focused at many
different levels in the historic and contemporary context: from the individual to the commu-
nity, from the activities of patients as health producers to the contribution of informal carers,
and from health care assistants with brief training to fully fledged health professionals in
the labour force. It can be critically challenging of the higher level structures surrounding
health care, as well as being supportive of positive client-centred change on the ground in
practice. As such, those concerned with health care may operate in a local, national and/or
international context. This is reflected in the range of research undertaken in the health field,
as well as in its applicability to different layers of government policy.
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 may be more inclined to pivot their policies on interventions that are most efficacious (Kuhlmann and Saks 2008). Recently, clinical science centred on a biomedical model of disease has made a considerable contribution to developing evidence for treatment based on clinical trials and experimental methods. This is witnessed by the Cochrane Collaboration, for example, which since its establishment has driven the growth of international centres for preparing, maintaining and disseminating systematic reviews in health care, typically based on randomized controlled trials (RCTs) (Lancaster et al. 1997).

In the UK specifically, governments over the past 15–20 years 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 the 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 disease and illness should have priority for funding, along with what are considered to be the most efficacious interventions.

Both clinical and policy research in recent decades have benefited from unprecedented levels of research funding to evaluate interventions and to carry out pilot projects. The National Institute of Health Research (NIHR) Research and Development Programme, directed by the Department of Health, has made substantial research funds available for work on policy priorities such as the cause, care, cure and prevention of dementia and surgical interventions. 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, but not all developments 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 science-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 explored in Chapter 15. What is apparent is that both nationally and internationally, work on policy issues such as professional governance can be as important for health care users as clinical research itself, although the two are clearly interrelated.
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 UK at least has been conventional hospital-based acute care, following the establishment and expansion of scientific medicine (Le Fanu 2011). In contrast, many areas from nursing (Witz and Annandale 2006) and primary care (Saks et al. 2000) to complementary and alternative medicine (Saks 2005) and mental health (Heller et al. 2000) have until recently been Cinderella areas. Nonetheless, this balance in the UK and elsewhere is beginning to change as governments worldwide invest more extensively in health research and associated health policies.

The Readership, Aims and Focus of the Book

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 UK, 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 21, which 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 research in the health field. This differentiates it from more general research texts (as exemplified by Argyrous 2005; Bryman 2008; Silverman 2010). 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, Green and Thorogood 2004; Scott and Mazhindu 2005; Bruce et al. 2008); specific groups of health practitioners (see, for example, McSherry et al. 2001; Ernst 2006; Gerrish and Lacey 2010); or particular practice contexts such as clinical hospital-based medicine or primary care (as illustrated by Wilson et al. 2000; Earl-Slater 2002; Cosby et al. 2006). Instead, it discusses more expansively how health research methods can be applied more generally and the issues that they raise.
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. The subsequent chapters also contain case studies and conclude 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 added advantage of drawing on a range of contributions from leading experts in the field. It is therefore distinct from, but complementary to, widely used texts by Bowling (2009) and Bowling and Ebrahim (2005), which take a multidisciplinary approach to health research. 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. Research projects in which they have engaged mutually or separately include using research methods in primary care, professional regulation, orthodox and alternative medicine, consumers in health care, quality assurance in health care and comparative health care (see, for example, Saks et al. 2000; Allsop and Saks 2002; Saks 2003; Baggott et al. 2005; Kuhlmann and Saks 2008; Kuhlmann et al. 2009). They also bring experience of examining doctoral research nationally and internationally, commissioning research and reviewing research protocols, and evaluating research reports through their membership of a range of government policy and research committees. Their experience is complemented by that of the broad span 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. The first part starts with contributions 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 Judith Allsop on competing paradigms and health research, which examines different methodological paradigms in the process of the 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, on undertaking literature reviews in health, is by Kathryn Jones, 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 Methods and Health and Quantitative Methods and Health 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.
- Questions appropriate to critically appraise the method.
- How to evaluate the findings of research studies that use the method.
- Ethics issues related to the method concerned.

Within this framework, the second part of the book 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 by examining in Chapter 4 the ways in which documents have been and can be used for health research. He describes 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 analysed. 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.

The third part 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, Alastair Scott and Martin von Randow, 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 analyse the quantitative data deriving from these and other sources in researching health. The basic concepts and principles related to RCTs are then outlined by George Lewith and Paul Little in Chapter 12. Niroshan Siriwardena complements this contribution in Chapter 13 by selectively providing insights into experimental and quasi-experimental methods, which offer alternatives to the RCT 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, the fourth part of the book 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. Janet Richardson and Mike Saks in Chapter 16 then explore some of the issues involved in researching the controversial area of complementary and alternative medicine, as opposed to orthodox medicine, in which there is fast-rising public interest. In Chapter 17, Mark Johnson discusses in their wake issues of health research involving ethnic minority groups in a multicultural society. Ellen Kuhlmann and Ellen Annandale take further the analysis of minority groups in research by considering the role of gender in health research in Chapter 18. Stephen Gillam, Penny Cavenagh and Peter Bradley examine various aspects of public health research – including, epidemiology, health needs assessment and social marketing – in Chapter 19. Given the importance of users in lobbying for particular causes, it is most appropriate that Sophie Hill next examines the nature and characteristics of user engagement in health research in Chapter 20. This part of the text ends with Chapter 21 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 an expanded fifth part on Applying Health Research. This begins with Chapter 22 by Jonathan Tritter which 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. Chapter 23 is then provided by the editors, Judith Allsop and Mike Saks, and centres on different phases of the research process and the skills involved in writing up a range of forms of health research. Finally, Chapter 24, also by Mike Saks and Judith Allsop, focuses on the central task of disseminating and using health research so that it can be effectively applied in practice, which provides one of the strongest rationales for undertaking research in this area in the first place.

Key Themes in Researching Health

In this volume, several strong substantive and interlinked contemporary themes emerge across the various chapters, in addition to the consideration of a range of quantitative and qualitative research methods. Two particular interrelated themes are highlighted here to illustrate the multidimensional nature of this volume. They include, first, the role of health care users, both patients and carers, in contributing to the research process and, second, the ethics of research in health. Health care users 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. They should be considered as participants and partners in health research and 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’ health care users. There are therefore powerful arguments in favour of trying to ensure that users 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 also runs through this text is that many current research projects use a mixture of methods and research and are consequently often interdisciplinary. This raises issues of how data collected using different methods can be analysed 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 part of the text will assist singleton researchers, among others, in developing and presenting their work. However, there is no doubt that undertaking research based on the work of teams is now a more typical setting for the career researcher. While this can often pose management problems, there are many benefits that flow from working collaboratively in a team – as the more general experience of
inter-professional working in health and other fields amply demonstrates (see, for instance, Day 2007). The concluding part of the book and a number of other chapters comment on the implications of this more collective way of working.

**Conclusion**

Research in principle, with some caveats, benefits those involved with health, whether as provider, producer or user. 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, as we note above, the contribution of research in the health field has developed unevenly in practice.

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 health research are increasing – notwithstanding the very challenging global economic climate – it is significant that the onus on researchers to produce robust results based on sound methods has never been greater (Kuhlmann and Saks 2008). Producing well considered and rigorous results 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, as discussed further in Chapter 24. We hope that this book on researching health will assist in this critical process, in shaping the health strategies and activities that lie ahead at all levels and across a wide range of settings.

**Recommended Further Reading**

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


