

# Introduction to Research

Mark Walsh  
Lynne Wiggins



*Foundations in  
Nursing and Health Care*

*Series editor: Lynne Wiggins*



 nelson thornes

Text © Mark Walsh and Lynne Wiggins 2003  
Original illustrations © Nelson Thornes Ltd 2003

The right of Mark Walsh and Lynne Wiggins to be identified as authors of this work has been asserted by them in accordance with the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage and retrieval system, without permission in writing from the publisher or under licence from the Copyright Licensing Agency Limited, of 90 Tottenham Court Road, London W1T 4LP.

Any person who commits any unauthorised act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

Published in 2003 by:  
Nelson Thornes Ltd  
Delta Place  
27 Bath Road  
CHELTENHAM  
GL53 7TH  
United Kingdom

03 04 05 06 07 / 10 9 8 7 6 5 4 3 2 1

A catalogue record for this book is available from the British Library

ISBN 0 7487 7118 2

Illustrations by Clinton Banbury  
Page make-up by Michael Fay

Printed in Croatia by Zrinski

## Contents

Introduction	v
Chapter 1 <b>Research and its role in health care</b>	1
Chapter 2 <b>Linking research to evidence-based practice and audit</b>	6
Chapter 3 <b>Types of research investigation</b>	14
Chapter 4 <b>The role of theory in research</b>	20
Chapter 5 <b>Reading and judging research</b>	28
Chapter 6 <b>Identifying an area for research and developing a research question</b>	36
Chapter 7 <b>Using background literature in research</b>	49
Chapter 8 <b>Reading and evaluating published research</b>	58
Chapter 9 <b>Research strategies</b>	69
Chapter 10 <b>Research designs</b>	88
Chapter 11 <b>Ethical considerations and developing a research proposal</b>	106
Chapter 12 <b>Analysing data</b>	117
Chapter 13 <b>Writing a research report</b>	133
Appendix <b>Answers to rapid recap questions</b>	142
Index	147



# 1

## Research and its role in health care

### Learning outcomes

By the end of this chapter you should be able to:

- Define what research is and the key characteristics of research
- Identify the stages of the research process

### What is a research investigation?

Textbooks usually adopt one of two main approaches to defining what 'research' is. The first approach sees research as a range of practical skills and activities that are used to conduct particular types of investigation. This approach defines research in terms of what researchers do and the ways in which they do it. A second approach sees research as a way of thinking (Kumar 1996). In this approach, research is about asking critical questions, thinking about and examining evidence and using this to understand phenomena, issues or problems more clearly.

Both these approaches are useful ways of understanding and defining what is involved in a research investigation. As a result, a third approach is to say that a research investigation involves both a particular way of thinking and an identifiable range of skills and activities. Within this book we are going to cover both the practical skills and activities and the thinking part of doing a research investigation. We will also look at how to understand other peoples' research and use it in health-care settings.

### Characteristics of research investigations

It is important at this early stage that you see a research investigation as something more than asking a group of people a few questions or looking up a topic in several books and then summarising your findings. You have probably heard of people doing this and saying that they have done some research. Real research investigations involve more than this kind of general seeking of information. The types of research investigation that you are going to learn about involve:

- Putting forward ideas that can be *tested*
- Collecting data to test these ideas in a *systematic* way
- *Analysing* the collected data
- Drawing conclusions based on the research *evidence*

According to Kumar (1996), research investigations should follow a **process** that:

- Is undertaken within a clear philosophical framework
- Uses procedures, methods and techniques that are evaluated for their *validity* and *reliability*
- Is designed to be *unbiased* and *objective*

The term **research process** is very important here. A process is a series of actions or an accepted method of doing something. While research investigation is exciting because it is about discovering and exploring, professional and academic researchers tend to go about their discovering and exploring in a controlled, rigorous and systematic way. In other words, they follow a research process.

### Following a research process

A research process is simply a planned, structured approach to inquiry that ensures that your investigation proceeds in a logical, coherent way. There is no one perfect way to conduct a research investigation, so there is no single model of the research process as such. There is, however, a broadly accepted series of phases that should be a part of a process of research inquiry.

Researchers have to complete a number of different activities as they work through each phase of their research process. Within the text and activities outlined in the remaining chapters of the book the issues and decisions that researchers face are discussed.

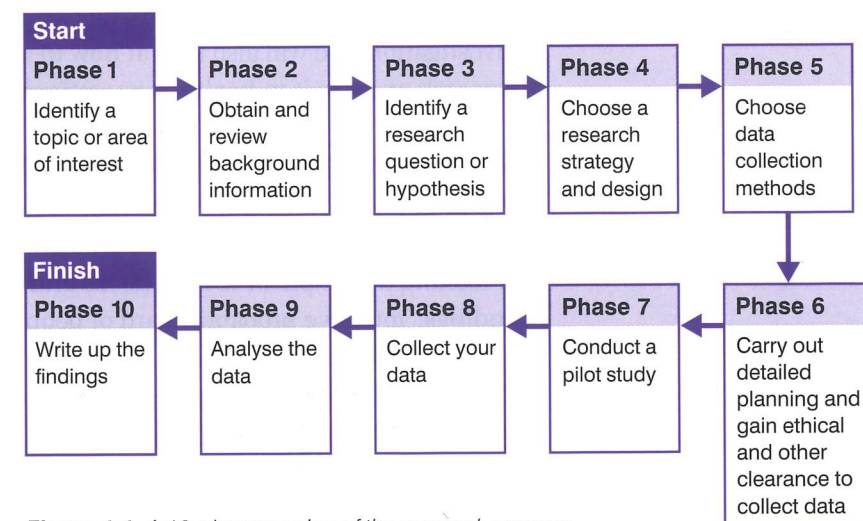


Figure 1.1 A 10-phase version of the research process

### Keywords

#### Ontological

Ontological assumptions are the researcher's views about the nature of reality

#### Epistemological

Epistemological assumptions are the researcher's decisions about how best to gather research data on this reality

### Why bother to do research investigations?

Knowledge produced through research investigation is generally valued more highly than, and can be contrasted with, a common-sense or opinion-based understanding of the world. Common sense is based on unquestioned, taken-for-granted assumptions, while opinions reflect personal prejudices, preferences and ideals. Research-based knowledge, on the other hand, is based on *empirical evidence*, i.e. scientific evidence that comes from observation and experience of the real world.

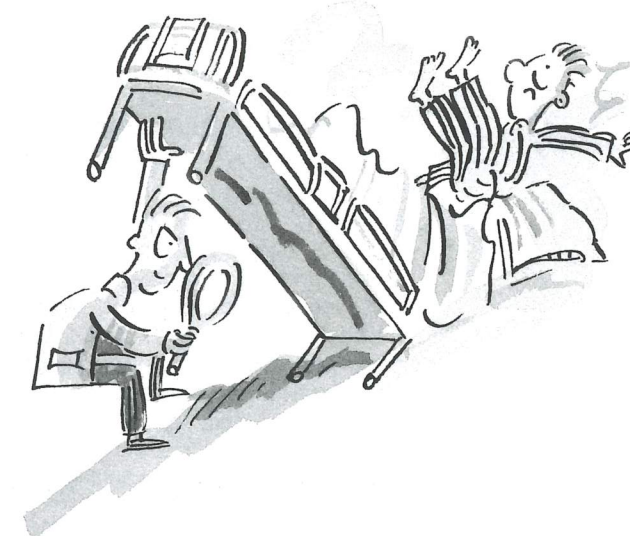
### How do you know what you know?

Research evidence is a form of knowledge that is typically based on a 'scientific' way of viewing reality or the 'truth' about the world. Health-care workers need to make judgements about what is correct or true in an endless variety of situations that affect their clinical practice. Have you ever wondered how you do this? You may not always consciously think about the basis of your decision making but whenever you do make a clinical decision you are drawing on some form of knowledge.

*Epistemology* is the theory of knowledge, it is:

*concerned with how we know what we know, what justifies us believing what we do, and what standards of evidence we should use in seeking truths about the world and human experience.*

Audi 1998, p. 1



Many researchers believe that *The Truth* is out there and it's their job to find it

**Theory and Practice**

Health-care research can usually be identified as belonging to one of these national or local topic areas

- Disease/ practice related research e.g. cancer care
- Management or Organisational research e.g. accident and emergency department working
- Client groups e.g. older people
- Consumer issues e.g. patient involvement
- Health technologies e.g. new information management systems
- Methodological e.g. action research regarding implementation of a new health policy
- Educational e.g. impact of new vocational health care training

Health-care knowledge is predominantly empirical or scientific in nature, but other forms of knowledge are also important in understanding health-care practice. For instance, the forms of knowledge that influence a decision to withdraw active treatment for a patient with cancer are not simply based on research data. Personal beliefs (cultural and religious, for example) as well as subjective judgements about pain and quality of life are also likely to be part of the 'knowledge' that underpins this type of decision.

Carper (1978) identifies four ways of knowing about health-care practice:

1. Empirical: scientific knowledge
2. Aesthetic: the art of performing practical skills through experience
3. Personal: the way health-care staff view and use themselves
4. Ethical: practice dilemmas and making moral decisions.

Despite the obvious importance of empirical or scientific knowledge to health care, the other forms of knowing identified by Carper (1978) show that more than one epistemological approach is needed if the true diversity of good practice is to occur.

### Why use research-based knowledge in health care?

There are lots of situations in which common sense and opinions are not a good enough basis for making decisions or developing understanding. For example, research can provide objective evidence that assists health and social policy-makers in deciding on ways of addressing issues or apparent problems in a local community.

### Case study

#### Meera's research study

Meera is a community nurse with special responsibility for issues related to sexual health and pregnancy. She is concerned that the teenage pregnancy rate in her town is relatively high compared to other areas around the UK. The view of many local people is that girls who get pregnant do so deliberately, to gain housing from the council, and that the problem of teenage pregnancy is the result of some girls' bad parenting and poor upbringing. Meera believes that this common-sense, opinion-based explanation of teenage pregnancy is unsatisfactory. She thinks that a sexual health promotion strategy for teenagers should be based on empirical evidence about local teenagers' knowledge and attitudes towards sex, contraception and relationships. Meera's intended research study will look at the sexual health knowledge, attitudes and behaviour of male and female teenagers in her local area. She feels that her research findings will provide an objective basis on which to plan her health promotion strategy.

Researchers generally aim to produce knowledge that is useful and that extends human understanding. The findings of research investigations can, at one extreme, lead to new theories that extend knowledge in disciplines such as health, social care and the social sciences. Other types of research investigation can also produce practically useful findings that influence and help policy-makers and practitioners working in fields such as health, welfare and education.

### RRRRR Rapid recap

Check your progress so far by working through each of the following questions.

1. Give three terms that describe research and indicate the difference between research and other forms of knowledge.
2. Explain what the term 'epistemology' means.
3. Jot down the different stages of the research process.

If you have difficulty with more than one of the questions, read through the section again to refresh your understanding before moving on.

### References

- Audi, R. (1998) *Epistemology: A contemporary introduction to the theory of knowledge*. Routledge, London.
- Carper, B. (1978) Fundamental patterns of knowing in nursing. *Advances in Nursing Sciences*, **1**, 13–23.
- Kumar, R. (1996) *Research Methodology*. Sage Publications, London.

### Further reading

- Benner, P. (1984) *From Novice to Expert: Excellence and power in clinical nursing practice*. Addison-Wesley, Menlo Park, CA.
- Bird, S., Nicholls, G. and White, E. (1995) An overview of the research methodologies available to the occupational therapist and an outline of the research process. *British Journal of Occupational Therapy*, **58**, 510–516.
- Green, S. (2000) *Research Methods in Health, Social and Early Years Care*. Stanley Thornes, Cheltenham, pp. 1–11.