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Reaching The Parts Other Methods Cannot Reach: An Introduction To Qualitative Methods In Health And Health Services Research

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Source: *BMJ: British Medical Journal*, Jul. 1, 1995, Vol. 311, No. 6996 (Jul. 1, 1995), pp. 42-45

Published by: BMJ

Stable URL: <https://www.jstor.org/stable/29727970>

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research and family practice may be a marriage made in heaven.<sup>27</sup> Collings failed to establish the legitimacy of ethnography as a form of scientific inquiry. Within general practice Collings is remembered not for his contribution to research methods but for the revival of the speciality. At the same time (doubtless because it was published in a medical journal) his study has been neglected by historians of social research. As a result, Collings has failed to attract the consideration he deserves as a pioneer of British ethnography.

I thank the anonymous reviewers of an earlier draft of the manuscript for their constructive criticisms.

Source of funding: This research was unfunded.

Conflicts of interest: None.

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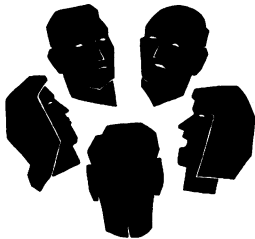
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(Accepted 9 March 1995)

## Qualitative Research

### Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research

Catherine Pope, Nick Mays



This is the first of seven articles describing non-quantitative techniques and showing their value in health research

**Qualitative research methods have a long history in the social sciences and deserve to be an essential component in health and health services research. Qualitative and quantitative approaches to research tend to be portrayed as antithetical; the aim of this series of papers is to show the value of a range of qualitative techniques and how they can complement quantitative research.**

#### Aims of this series

Medical advances, increasing specialisation, rising patient expectations, and the sheer size and diversity of health service provision mean that today's health professionals work in an increasingly complex arena. The wide range of research questions generated by this complexity has encouraged the search for new ways of conducting research. The rapid expansion of research on and about health and health services, and the relatively recent demarcation of a distinct field of "health services research" depend heavily on doctors and other health professionals being investigators, participants, and peer reviewers. Yet some of the most important questions in health services concern the organisation and culture of those who provide health care, such as why the findings of randomised controlled trials are often difficult to apply in day to day clinical practice. The social science methods appropriate to studying such phenomena are very different from the methods familiar to many health professionals.

Although the more qualitative approaches found in certain of the social sciences may seem alien alongside the experimental, quantitative methods used in clinical and biomedical research, they should be an essential component of health services research—not just

because they enable us to access areas not amenable to quantitative research, such as lay and professional health beliefs, but also because qualitative description is a prerequisite of good quantitative research, particularly in areas that have received little previous investigation. A good example of this is the study of the social consequences of the application of new genetic techniques to screening for genetic disease.<sup>1</sup> New genetic technologies place individuals, couples, and families in novel circumstances facing unprecedented decisions about such things as reproduction, transmission of genetic defects, and the response to information about predisposition to particular diseases. The starting point for social research in this field is therefore an attempt to understand how and why people conceptualise genetic risks and why they behave as they do when faced with them.

The aim of this series is to introduce some of the main qualitative research methods currently used in health care research and to indicate how they can be appropriately and fruitfully employed. The papers review observation, in depth interviews, focus groups, consensus methods, and case studies, all of which doctors and other health professionals are increasingly coming into contact with. We hope that by making clear what these methods entail, how they are used, and how they can be evaluated, they will seem less strange and be viewed as valuable tools in the methodological tool box of health and health services research. The papers on specific qualitative methods are preceded by a paper on validity and reliability in qualitative research. Box 1 provides short definitions of some of the terms used in qualitative research which appear in the papers in the rest of the series.

Although relatively uncommon in health services research, qualitative methods have long been used in

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BMJ 1995;311:42-5

## Box 1—Glossary of terms used in the series

**Epistemology**—theory of knowledge; scientific study which deals with the nature and validity of knowledge

**Naturalistic research**—non-experimental research in naturally occurring settings

**Social anthropology**—social scientific study of peoples, cultures, and societies; particularly associated with the study of traditional cultures

**Induction**—process of moving from observations/data towards generalisations, hypotheses, or theory; **grounded theory**—hypothesising inductively from data, notably using subjects' own categories, concepts, etc; opposite of **deduction**, process of data gathering to test predefined theory or hypotheses

**Purposive or systematic sampling**—deliberate choice of respondents, subjects, or settings, as opposed to **statistical sampling**, concerned with the representativeness of a sample in relation to a total population. **Theoretical sampling** links this to previously developed hypotheses or theories

**Fieldnotes**—collective term for records of observation, talk, interview transcripts, or documentary sources. Typically includes a field diary which provides a record of the chronological events and development of research as well as the researcher's own reactions to, feelings about, and opinions of the research process

**Content analysis**—systematic examination of text (field notes) by identifying and grouping themes and coding, classifying, and developing categories. **Constant comparison**—iterative method of content analysis where each category is searched for in the entire data set and all instances are compared until no new categories can be identified. **Analytic induction**—use of constant comparison specifically in developing hypotheses, which are then tested in further data collection and analysis

**Triangulation**—use of three or more different research methods in combination; principally used as a check of validity

**Observation**—systematic watching of behaviour and talk in naturally occurring settings. **Participant observation**—observation in which the researcher also occupies a role or part in the setting in addition to observing

**In depth interviews**—face to face conversation with the purpose of exploring issues or topics in detail. Does not use pre-set questions, but is shaped by a defined set of topics or issues

**Focus groups**—method of group interview which explicitly includes and uses the group interaction to generate data

**Consensus methods** include **Delphi** and **nominal group techniques** and **consensus development conferences**. They provide a way of synthesising information and dealing with conflicting evidence, with the aim of determining extent of agreement within a selected group

**Case studies** focus on one or a limited number of settings; used to explore contemporary phenomenon, especially where complex interrelated issues are involved. Can be exploratory, explanatory, or descriptive or a combination of these

**Validity**—extent to which a measurement truly reflects the phenomenon under scrutiny

**Hawthorne effect**—impact of the researcher on the research subjects or setting, notably in changing their behaviour

**Reliability**—extent to which a measurement yields the same answer each time it is used

the social sciences. Social anthropology, for example, was founded on studies in which an understanding of the customs and behaviour of people from remote lands was gathered by researchers who spent time living in those societies, often learning their languages so they could participate while observing. In a similar way, these naturalistic methods—in essence, watching, joining in, talking, and reading about the group being studied—are used by qualitative sociologists to study the familiar: our own society. Health care is just one area where these techniques have been applied to study subjects such as the organisation of health services, interactions between doctors and patients, and the changing roles of the health professions.

### What are qualitative methods?

The common feature of the methods discussed in this series is that they do not primarily seek to provide quantified answers to research questions. So what exactly do they aim to do? The goal of qualitative research is the development of concepts which help us to understand social phenomena in natural (rather than experimental) settings, giving due emphasis to the meanings, experiences, and views of all the partici-

pants. As a result they are particularly suited, for example, to understanding how it is that health education messages on stopping smoking can be well known to teenagers or young working class women but not perceived as relevant to their everyday lives.<sup>2,3</sup> Qualitative studies are concerned with answering questions such as “What is X and how does X vary in different circumstances, and why?” rather than “How many Xs are there?” Since qualitative research does not generally seek to enumerate, it is viewed as the antithesis of the quantitative method; indeed, the two approaches are frequently presented as adversaries in a methodological battle. This view is often reinforced by highlighting a corresponding split in social theory between theories concerned with delineating social structure and those interested in understanding social action or meaning. Box 2 presents a caricature of the differences between qualitative and quantitative methods in the social sciences which are often marshalled as evidence of the essential incompatibility of the two approaches.

The randomised controlled trial, with its focus on hypothesis testing through experiment controlled by means of randomisation, can be seen as the epitome of the quantitative method. Answering the “what is X” question, though, is the foundation of quantification: until something is classified it cannot be measured. Moreover, because health care deals with people and people are, on the whole, more complex than the subjects of the natural sciences, there is a whole set of questions about human interaction and how people interpret interaction which health professionals may need answers to. Experimental and quantitative methods are less well suited to answer these questions.

Consider an example from research on diabetes. There can be no doubt that quantitative methods, including randomised controlled trials, have contributed to advances in the treatment of this disease.<sup>4</sup> As well as knowing that glycaemic control is effective in reducing long term complications, health professionals may need answers to additional questions—for example, those concerned with patient behaviour. For a general practitioner, knowing that intensive insulin therapy works may be secondary to knowing whether the patient will comply with the treatment. This is where qualitative research can be useful. Indeed, there is a body of work which examines and explains why patients do not comply with treatment regimens.<sup>5</sup>

The rigid demarcation of qualitative and quantitative research as opposing traditions that is shown in box 2 does not encourage movement or interaction between the two camps. In effect, researchers on either side become entrenched and are often ignorant of each other's work. Within sociology there is a growing recognition that the quantitative-qualitative distinction has created an unnecessary divide, and this has done little to assist the progress of the discipline.<sup>6</sup> In health services research the differences between qualitative and quantitative methods continue to be overstated and misunderstood.<sup>7</sup>

The dichotomy described in box 2 suggests that whereas quantitative methods aim for reliability (that is, consistency on retesting) through the use of tools such as standardised questionnaires, qualitative methods score more highly on validity, by getting at how people really behave and what people actually mean when they describe their experiences, attitudes, and behaviours. In addition, the reasoning implicit in qualitative work is held to be inductive (moving from observation to hypothesis) rather than hypothesis testing or deductive. For example, much methodological writing in the qualitative tradition emphasises that in order to get behind respondents' formal public statements and behaviour to uncover their personal perceptions and actual day to day actions, it is

## Box 2—The overstated dichotomy between quantitative and qualitative social science

	Qualitative	Quantitative
Social theory:	Action	Structure
Methods:	Observation, interview	Experiment, survey
Question:	What is X? (classification)	How many Xs? (enumeration)
Reasoning:	Inductive	Deductive
Sampling method:	Theoretical	Statistical
Strength:	Validity	Reliability

important not to impose a priori categories and concepts from the researcher's own professional knowledge on to the process of data collection. Rather than starting with a research question or a hypothesis that precedes any data collection, the researcher is encouraged not to separate the stages of design, data collection, and analysis, but to go backwards and forwards between the raw data and the process of conceptualisation, thereby making sense of the data throughout the period of data collection.<sup>8</sup>

In the methodological debate, these distinctions are frequently presented as clear cut, but the contrasts are more apparent than real. In health services research, because of its applied nature, much research is driven, not by the theoretical stance of the researcher, but by a specific practical problem which is turned into a research question. As Brannen notes, "There is no necessary or one to one correspondence between epistemology and methods." As she suggests, the choice of method and how it is used can perfectly well be matched to what is being studied rather than to the disciplinary or methodological leanings of the researcher. It is therefore possible to envisage deductive pieces of qualitative research.

### How can qualitative methods complement quantitative ones?

It would seem more fruitful for the relation between qualitative and quantitative methods to be characterised as complementary rather than exclusive. There are at least three ways in which this can be achieved. Firstly, as noted above, qualitative work can be conducted as an essential preliminary to quantitative research. Qualitative techniques such as observation, in depth interviews, and focus groups (which are covered in subsequent papers in this series) can be used to provide a description and understanding of a situation or behaviour. At their most basic, these techniques can be used simply to discover the most comprehensible terms or words to use in a subsequent survey questionnaire. An excellent recent example of this was the qualitative research conducted to establish which sexual terms would be most appropriate to use in the British national survey of sexual attitudes and lifestyles.<sup>10</sup> This work highlighted several ambiguities and misunderstandings. "The meaning of many terms—'vaginal sex', 'oral sex', 'penetrative sex', 'heterosexual'—was unclear to a sizeable enough number of people to threaten substantially the overall validity of response."

The second way qualitative methods can be used is to supplement quantitative work. This can be part of the validation process, as in "triangulation,"<sup>11</sup> where three or more methods are used and the results compared for convergence (for example, a large scale survey, focus groups, and a period of observation), or as part of a multimethod approach which examines a particular phenomenon or topic on several different levels.<sup>9</sup> This is not simply a matter of joining two techniques, or tacking one on the end of a project.

Researchers need to be aware of the different types of answers derived from different methods. Cornwell's work looking at the health of families in the east end of London was able to distinguish powerfully between the public and private accounts provided by respondents.<sup>12</sup> Though a survey may pick up the public account, a series of in depth interviews are needed to get at the private, often contradictory and complex beliefs people hold. This theme is pursued by Britten in the fourth paper in this series. It would be invidious to suggest that one or the other source was the more valid; suffice it to say that different research settings and different methods allow access to different levels of knowledge. None the less, combining methods can help to build a wider picture, and this is especially productive when used to explore the findings of previous research, such as the observational examination of the surgical decision making process by Bloor *et al*, which built on an epidemiological study of the widespread variations in the rates of common surgical procedures (box 3).<sup>13</sup>

The third way in which qualitative research can complement quantitative work is by exploring complex phenomena or areas not amenable to quantitative research. The value of this sort of stand alone qualitative research is increasingly widely recognised in studies of health service organisation and policy.<sup>14</sup> It

## Box 3—Two stage investigation of the association between differences in geographic incidence of operations on the tonsils and adenoids and local differences in specialists' clinical practices<sup>13</sup>

### I Epidemiological study—documenting variations

Analysis of 12 months' routine data on referral, acceptance, and operation rates for new patients under 15 years in two Scottish regions known to have significantly different 10 year operation rates for tonsils and adenoids.

Found significant differences between similar areas within regions in referral, acceptance, and operation rates that were not explained by disease incidence

Operation rates influenced, in order of importance, by:

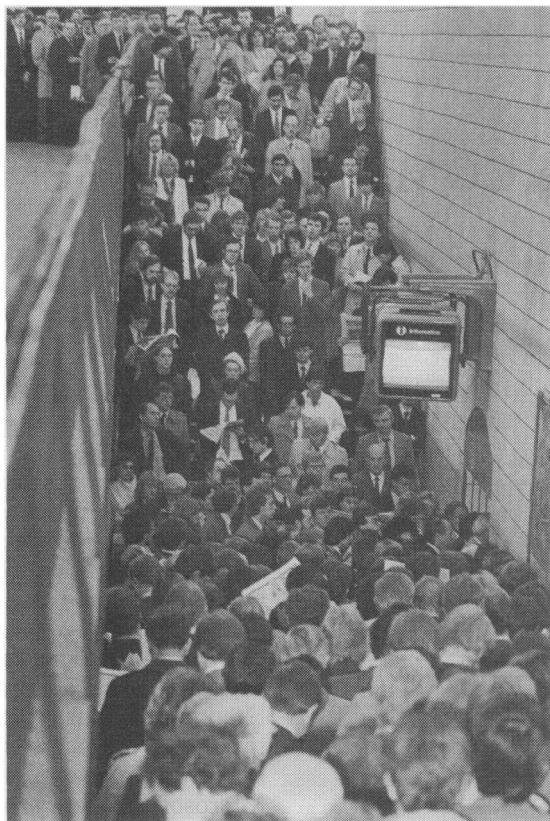
- Differences between specialists in propensity to list for operations
- Differences between GPs in propensity to refer
- Differences between areas in symptomatic mix of referrals.

### II Sociological study—explaining how and why variations come about

Observation of assessment routines undertaken in outpatient departments by six consultants in each region on a total of 493 under 15s.

Found considerable variation between specialists in their assessment practices (search procedures and decision rules), which led to differences in disposals, which in turn created local variations in surgical incidence.

"High operators" tended to view a broad spectrum of clinical signs as important and tended to assert the importance of examination findings over the child's history; "low operators" gave the examination less weight in deciding on disposal and tended to judge a narrower range of clinical features as indicating the need to operate.



HUGHES/PHOTOFUSION

People are complex and should be studied by watching them, joining in, talking, and reading what they write

may be especially useful in looking at health services in times of reform or policy change from the point of view of the patients, professionals, and managers affected. At the end of this series, Keen and Packwood provide one example of how qualitative methods can be used to examine the consequences of changes in resource allocation and management practices at the micro level within NHS hospitals. In addition, qualitative work can reach aspects of complex behaviours, attitudes, and interactions which quantitative methods cannot. As a result it has been extremely useful for examining clinical decision making by probing and exploring both the declared and the implicit or tacit routines and rules which doctors use.<sup>15 16</sup>

In this series the aim is to show how qualitative methods can, and do, enrich our knowledge of health

and health care. It is not that qualitative methods are somehow superior to quantitative ones—such a position merely perpetuates the quantitative-qualitative dichotomy—but that we need a range of methods at our fingertips if we are to understand the complexities of modern health care. “What is involved is not a crossroads where we have to go left or right. A better analogy is a complex maze where we are repeatedly faced with decisions, and where paths wind back on one another. The prevalence of the distinction between qualitative and quantitative method tends to obscure the complexity of the problems that face us and threatens to render our decisions less effective than they might otherwise be.”<sup>17</sup>

#### Further reading

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#### On first name terms

Not long after I retired I ran into one of our old students as I was leaving a medical meeting. We exchanged the usual civilities and then he said, “There was one thing you taught me on a ward round which I have never forgotten.” I was flattered but mystified. “What was that?” “You asked me to examine an old man in one of the medical beds, and I said to him ‘Sit up Dad, let’s have a look at you.’ You pulled me up instantly. ‘He is not your Dad he is Mr Jones and that is how you should speak to him.’”

My role has changed—from doctor to patient. I returned recently to my old hospital for a small operation. I have nothing but praise for the way that I was treated by all concerned. Only one small incident made me feel a little uncomfortable. A young male nurse ushered me into an office with a cheerful “Come in Arthur, I just want to do a few tests.” A trifle, but somehow it grated. I come of a generation when the surname was the usual form of address, except among close friends and relatives. As a youth a nickname was sometimes bestowed on me. Later I learnt to be on first name terms with colleagues.

Nowadays, of course, the first name address is so common that people are unable to tell you the surnames of any of their friends. I was pernickety and out of date. Narrowing of cerebral arteries and diminishing cerebral neurones must be my excuse.

But at the eleventh hour Katharine Whitehorn, with her usual humanity and commonsense, has come to the rescue (*The Observer*, 9 April 1995). Medics, she maintains, “lead the field in the intrusive intimacy of calling everybody by their first names. The doctor addresses you as Jane because he thinks he is being friendly, and his receptionists and bottle washers follow suit.” She adds that “calling someone by their first name who must still call you Doctor, Nurse or Sir simply emphasises your superiority.”

We mean well, but nothing is straightforward. How difficult it all is. I do not really mind being called Arthur, now that I have got used to it. It is better than being called Dad by a total stranger.—A L WYMAN is a retired consultant physician in London