

Qualitative research and evidence-based healthcare

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INTRODUCTION

The evidence-based medicine (EBM) pages of the internet recently included an exchange during which a leading figure in the movement, argued that:

... depending on the question, qualitative research may be the only appropriate method to be used in finding a valid and useful answer. It is congruent with the philosophy of EBM¹.

This is a particularly powerful illustration of the growing legitimation afforded to the methods and findings of qualitative research within health services research in general and, albeit perhaps to a lesser extent, within the EBM movement in particular. But, whilst it may be a necessary condition, acknowledgement from leaders in a field is not sufficient to change knowledge, attitudes or behaviour—as those involved in the EBM are only too well aware. It is almost certainly the case that there are many proponents of evidence-based decision making within healthcare who cannot and/or will not accept that qualitative research has an important part to play in the pursuit of this aim.

We seek to address three issues. First, we want briefly to highlight some limitations of the EBM movement identified by social scientists. Second, we wish to explore the implications of the apparent shift away from a focus on medicine towards healthcare for the nature of the evidence which can legitimately be used. Finally, we consider some of the ways in which qualitative research can contribute to this broader agenda and point to some of the constraints on the achievement of this potential.

SOME LIMITATIONS OF THE EBM MOVEMENT

In an issue of *BMJ* some time ago Grahame-Smith produced an entertaining conversation between Socrates and Enthusiasticus². Enthusiasticus was expounding the importance and potential of the EBM movement, arguing, as many would agree, that healthcare professionals could no longer afford to ignore questions about the effectiveness of what

they do. Socrates, whilst agreeing with the principle, argued that medicine had always paid attention to effectiveness and warned Enthusiasticus that the movement was really a vehicle for tightening management control over medicine and over how resources are spent.

Both Socrates and Enthusiasticus are right—in part—but this socratic exchange, and other much more mundane conversations, miss the central point. Few would disagree with the arguments for those involved in clinical practice to be more accountable for the effectiveness and efficacy of what they do. However, in their enthusiasm many (albeit not all) proponents of EBM neglect a great deal of evidence which might legitimately contribute to this and a broader policy agenda. There are three related problems which we would wish to highlight and these relate to the pre-occupation with randomized control trials (RCT), with clinical effectiveness, and with medical practice.

We have discussed the problems associated with the dominance of 'big science' within health services research in more detail elsewhere, but these arguments are relevant here³. Specifically, while it is true that definitive evidence on the effectiveness of particular clinical interventions can only be provided by well-designed randomized control trials, it may also be true that there are some health interventions, beyond medicine, which are not readily amenable to rigorous experimental research design. This is arguably the case, for example, for complex geographically-based multi-sectoral policy interventions. Additionally, while effectiveness is clearly and indisputably a necessary aspect of decision making in healthcare, it will never be sufficient⁴. Prominent economists have argued the case convincingly for cost to be a compulsory prefix to effectiveness^{5,6}. Managers and others have highlighted the complex nature of decision making at all levels of healthcare with political and other constraints and priorities often displacing cost-effectiveness concerns⁷⁻⁹. Similarly, evidence on appropriateness—defined in terms of the extent to which care meets the needs of those receiving it—and on why people (lay and professional) behave as they do, also has a crucial role to play in healthcare decision making at all levels. Finally, although the rhetoric is now focused clearly on evidence-based healthcare, the practice of EBM remains very much concerned with medicine. Evidence-based decision making, and the many activities aimed at

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Box 1 Rationale and standards for systematic review of qualitative research: implications of shift from evidence-based medicine to evidence-based healthcare

Seeking evidence on effectiveness, appropriateness and/or acceptability of for example:

- Individual level interventions beyond medicine
- Organization of healthcare teams
- Service delivery/service settings/packages of care
- Organizational/managerial arrangements in and across organizations
- Management of change
- Service re-configuration/health surgery
- Complex policy experiments involving multi-agency working
- Equity

supporting this movement, has still to have a significant impact on professional practice without medicine and on the policy-making process at national, regional and local level.

In shifting from medicine to healthcare, the evidence-based practice movement can build on the powerful start it has made in improving the quality of medical practice and enhancing the accountability of medical practitioners. But the healthcare agenda can be set very widely, as Box 1 seeks to illustrate. The pursuit of evidence-based healthcare (rather than medicine) implies a move beyond medicine towards individual level interventions in other spheres of professional practice; for example, social work. Work identifying evidence of effectiveness in this area is underway but outside, or at least at the margins of, the Cochrane Collaboration. It implies a greater focus on the organization and management of healthcare systems and their component parts, such as healthcare teams, service delivery, service settings and packages of care. There should be more attention to effective ways of managing change within systems, as well as at the level of individual professionals, and to the development and implementation of effective health strategies. A healthcare focus also points to the need to develop methods for the evaluation of complex policy 'experiments' such as total purchasing and the soon to be announced health action zones. There could also be a search for effective ways of addressing issues of equity and justice within healthcare. It is evident from this list that the potential terrain for EBH calls for a wide range of different types of evidence in addition to, if not instead of, the RCT. Before illustrating this potential, we want briefly to consider what we mean by qualitative research.

QUALITATIVE RESEARCH: WHAT IT ISN'T . . .

Rather than present a dry, perhaps rather inaccessible, text book definition of qualitative research, we want instead to highlight what qualitative research is not, drawing on a

number of previous contributions to this debate. First, and perhaps surprisingly for some, it is not the opposite of quantitative research. The concept of 'measurement' is not absent. Qualitative research can and does involve a number of different approaches to measurement—words and phrases such as 'a lot', 'a little', 'many', 'most', may be used and themes arising from the research may be described as more, or less, prominent. In some studies, 'cases' may actually be counted, reflecting what has been termed 'cautious positivism'¹³.

Neither is qualitative research simply a set of practical techniques for collecting interesting descriptive data. Despite the best of intentions, there is a danger that recent introductory texts presenting qualitative research to people not familiar with or trained in relevant disciplines, may reinforce a tendency for health service researchers to see qualitative research as a tool box (including focus groups, indepth interviews, methods for developing consensus, participants' observation, etc.) devoid of epistemological salience or theoretical foundation. Related to this is the apparent assumption amongst some in the health research field, that qualitative research is an easy option—after all, anybody can have a taped conversation with patients, for example, and write up the material enriched with relevant quotes. We would argue that, in contrast, and as discussed in the final section of this paper, rigour in qualitative research can and must be adhered to and it is possible to identify criteria which may aid this process.

Thirdly, qualitative research is not inevitably small scale. Clearly, much of it does involve small samples, primarily because of the labour intensive nature of data collection and analysis. However, some qualitative research, such as Phil Strong's study of the ceremonial order of the clinic¹⁴ involved observations of over 1000 consultations. Fourth, qualitative research is not 'non-generalizable'. Hammersley¹⁵, for example, has argued that an important indicator of quality in qualitative research is the extent to which it produces findings which are transferable to other settings. Obviously, generalizability within the qualitative tradition is of a different order to the kind of generalizability that one can make from an experiment or survey. The aim is to identify findings which are 'logically generalizable' rather than 'probabilistically' so¹⁶. There are many examples of qualitative research findings which illustrate this notion of 'logical generalizability' and which have had significant impact on policy. A notable work on the subject is that of Goffman¹⁷ on the impact on patients and staff of 'total institutions' such as mental hospitals. This work was based on detailed observations of one ward and subsequently at least contributed to a paradigm shift in mental health policy.

At the risk of oversimplifying, it is possible to point to things that qualitative research emphasizes, rather than to what it is. It is concerned above all with the negotiation and

construction of meanings in social interaction. It focuses on the meanings that people attach to experiences, the relationship between knowledge, experience and action and the social factors that shape these processes. It begins from the premise that experientially there is no single truth—starting instead from the premise that there will be different meanings attaching to the same or similar experiences depending on the social context. Similarly, qualitative research is based on the assumption that to understand why people behave the way they do, when they do, it is necessary to see human behaviour within its social context. The considerable potential of this approach to research in the health field is illustrated by Hilary Graham's work seeking to understand the factors (in addition to knowledge about the health risks) which shape the smoking behaviour of poor women¹⁸. In the same way, qualitative research can also help us to better understand why clinicians continue to 'ignore' evidence of effectiveness despite the best efforts of the research community. In the next section some of the ways in which qualitative research can contribute to EBH are considered in more detail.

WHAT ROLE FOR QUALITATIVE RESEARCH IN EBH CARE?

There are two somewhat different models of the potential role of evidence from qualitative research in the assessment of healthcare—an 'enhancement' model and a 'difference' model.

Key elements of an enhancement model of the role of qualitative research have been described in some detail by other writers. In this model the role of qualitative research is strongly linked to quantitative research. For example, Nick Black, has identified six reasons why health service research 'needs' qualitative research: to understand why interventions work; to improve the accuracy and relevance of quantitative studies; to identify appropriate variables to be studied in quantitative research; to explain unexpected results from quantitative work; and to generate hypothesis to be tested using quantitative methods. Some of these are more familiar and more widely accepted as legitimate roles for qualitative research than others. The use of qualitative methods in 'pre-protocol' or 'pilot' work, for example, is now widespread within health services research (HSR). Increasingly, however, examples of all of these uses for qualitative research can be identified within the health research field. The contribution qualitative research can make to EBH in particular, and HSR in general, is important and should not be discounted. However, qualitative research has potentially got a much greater contribution to make than the 'enhancement' model suggests.

Box 2 Rationale and standards for systematic review of qualitative research: the role of quantitative research

Difference model

- 1 Exploring 'taken for granted' practices in health care
 - Goffman: asylum: the total institution
 - Strong: ceremonial order of the clinic
 - Silverman: child as a social object: consultation
 - Pope: waiting lists
- 2 Understanding lay/clinical behaviour/developing 'interventions'
 - Graham: poor women's smoking behaviour
 - Rogers and Pilgrim: vaccination uptake
 - Elliot: use of mental health services
 - Daly: use of echocardiography
 - Kai: parent's response to children's illness
 - Black: barriers to clinical audit
- 3 Patient's perceptions on quality/appropriateness
 - Pound *et al.*: stroke survivors on physiotherapy
 - Fitzpatrick *et al.*: headache patients on neurological clinic
- 4 Organizational culture and change management
 - Packwood *et al.*: resource management initiative
 - Pollitt *et al.*: introduction of general management
- 5 Evaluation of complex policy initiatives
 - Flynn *et al.*: contracting and internal market
 - May *et al.*: total purchasing pilot projects

Enhancement model

- 1 Understanding why interventions work
- 2 Improve accuracy and relevance of quantitative
- 3 Identify appropriate variable to be measured
- 4 Explained unexpected results
- 5 Generate hypotheses to be tested throughout quantitative research

There are ways in which qualitative research can contribute to the pursuit of EBH that are independent of the contribution of other methodologies. Some major elements within this 'difference' model are shown in Box 2 which also gives examples of qualitative studies to illustrate each kind of contribution.

Goffman's early work on the profound ways in which 'total' institutions such as large mental hospitals, can affect the behaviour of people that live and work within them, has already been mentioned. This is a particularly dramatic illustration of the way in which qualitative research can be used to explore 'taken for granted' practices within healthcare and to point to ways in which individual clinical practice and/or health policy might be changed to provide more humane, appropriate, effective and/or efficient care. Pope's¹⁹ research into the operation of waiting lists, for example, has highlighted how such lists, rather than representing queues of people, are more appropriately conceptualized as Ox-bow lakes, calm slow moving

stretches of water, alongside fast flowing currents all of which are manipulated by consultants, clerical staff and, in some instances patients themselves. This conceptualization has very different implications for policy than the notion of an orderly equitable queue inherent in the idea of a 'list'. A different type of example of qualitative research which challenges taken for granted practices within healthcare is the study of the way in which children are marginalized and objectified in consultations involving children with Down's syndrome.

Another prominent field of qualitative research which has much to offer EBH, is that which offers insights into the factors that shape lay and clinical behaviour. This work can explain why uptake (of care by patients or innovations by clinicians) is poor or uneven and can have important implications for the type of, and manner in which, services are provided. Hilary Graham's important work on smoking behaviour amongst poor women has already been noted. The study of parents' attitudes to immunization, by Rogers and Pilgrims²⁰ is another example of work in this genre, as is Daly's study of echocardiography and Black's¹¹ study of barriers to clinical audit. This type of work can also point to new types of interventions, drawn from patients' experience.

Qualitative research is also being increasingly used in the evaluation of the outcomes of care. Work by Sara Mallinson (*neé* Hill)²², for example, comparing results from the SF 36 with qualitative evaluations of continence services for older people highlights the very different and potentially contradictory perspectives these two approaches can give. Qualitative evaluations can pick up small but profoundly significant changes in people's conditions resulting from interventions which structured methods could never be sensitive to. Work in a similar vein is Pound's²³ study of stroke survivors' assessment of the outcomes of physiotherapy and research in headache patients' views on the value of visits to neurological clinics²⁴.

Two final and related fields of qualitative research which could inform the development of EBH, particularly at the level of policy, is that concerned to provide a better understanding of organizational culture and the management of change and evaluative research on large-scale complex policy initiatives. Examples of the former include research on the introduction into the National Health Services (NHS) of the Resource Management Initiative²⁵ and general management²⁶. More recently, one can point to the formal evaluation of the total purchasing pilot schemes being coordinated by Nick May at the King's Fund Policy Institute²⁷ and the ESRC funded evaluation of contracting for community health services in the internal market²⁸. Both of these studies adopted a formative process evaluation design, involving a diverse and flexible range of research methods, predominantly but not exclusively of a qualitative nature.

FULFILLING THE POTENTIAL: IDENTIFYING CRITICAL SUCCESS FACTORS

We have argued that there is, potentially at least, a considerable role for qualitative research in generating the evidence base for effective, efficient and appropriate healthcare practice and policy. There are, however, barriers in the way of this potential being fully exploited. We would point to two factors in particular.

First, there is what we have referred to elsewhere as 'the gingerbread man' threat²⁹. In seeking to develop more fruitful relationships with colleagues operating in other research paradigms, there is a danger that social scientists working primarily, if not entirely within a qualitative frame, may be 'gobbled up' by the powerful wolf. This could happen in a number of ways. For example, the contribution of qualitative researchers may simply be devalued, made less visible, or straightforwardly appropriated by those more powerful and more wise in the ways of the world of 'big science'. More importantly, in what at times appears to be a rush to 'explain' qualitative research to researchers in other fields, there is a risk that it is presented as a basket of technical tools, devoid of the epistemological and theoretical basis that underpin its claim to be a legitimate means of generating 'knowledge'. This is linked in part to the lack of a shared framework, or standards for assessing quality in qualitative research.

Social scientists have identified a number of ways in which qualitative research can be assessed^{15,30}. Building on this work, we have developed elsewhere a rationale and a set of criteria to inform the systematic review of qualitative research literature with a particular focus on research which aims to illuminate the relationship between knowledge and action⁴. We recognize that there are some common elements needed for the evaluation of all research outputs. For example, it is important that all research-based publications provide sufficient detail of the research question, design and methods to allow an assessment. We also recognize that there are similar technical questions to be asked of all research, concerned for example, with sampling and analysis, though the answers to the questions may look somewhat different for qualitative and quantitative research. Importantly, however, we argue that prior to applying technical standards to the assessment of qualitative research, it is important to consider what we refer to as 'the primary knowledge marker'. Good qualitative research would resist examining the views of those being researched through the prism of professional knowledge, but rather attempt to find ways of according equal worth to different forms of knowledge. In evaluating qualitative research output in terms of this primary marker, the key question to be addressed is: does the research, as reported, illuminate the subjective meaning, actions and contexts, of those being researched? To make use of Max Weber's distinction, the

Box 3 Rationale and standards for systematic review of qualitative research: the primary marker

The Primary Marker: privileging subjective meaning

- Does research illuminate the subjective meaning, actions and context of those being researched?

Evidence of responsiveness to social context and flexibility of design

- Is there evidence of the adaptation and responsiveness of the design to the circumstances and issues of real-life social settings met during the course of the study?

Evidence of theoretical or purposeful sampling

- Does the sample produce the type of knowledge necessary to understand the structures and processes within which the individuals or situations are located?

Evidence of adequate description

- Is the description provided detailed enough to allow the researcher to interpret the meaning and context of what is being researched?

Evidence of data quality

- How are different sources of knowledge about the same issue compared and contrasted?
- Are subjective perceptions and experiences treated as knowledge in their own right?

Evidence of theoretical and conceptual adequacy

- How does the research move from description of data, through quotation or examples to an analysis and interpretation of the meaning and significance of it?

Potential for assessing typicality

- What claims are being made for the generalizability of the findings to either other bodies of knowledge or to other populations or groups?

Relevance to policy

- Is the relevance of research to a variety of different stakeholders clearly indicated?

point of explanation within qualitative research is not in the first instance with adequacy of the level of cause, but rather adequacy at the level of meaning³¹. An explanation that is 'meaningful' in this sense can contribute to understanding about why something happens or is the way it is. The way this 'knowledge question' is dealt with, we would argue, is the most important marker of standards in qualitative research and this would be reflected in the way in which other, more technical, standards in relation to data quality and adequacy are applied. Box 3 sets out a list of the criteria we suggest can be used in the systematic assessment of qualitative research and the related questions to be asked.

CONCLUSIONS

We welcome the movement for greater evidence-based decision making within the health field, and the shift (at a discursive level if not yet in substantive terms) away from a narrow focus on medicine towards healthcare more broadly defined. We have argued that evidence derived from qualitative research has an important contribution to make to this broader canvas and that there is a considerable body of relevant literature already waiting to be mined. However, we also believe that there are some formidable barriers in the way of the achievement of this potential. We have pointed in particular to the unequal social relationships of health research, and to the way in which the very different power and influence afforded to different disciplines and different types of knowledge, may inhibit

collaboration. We have also pointed to the need to develop a framework against which qualitative research can be assessed, but which resists the current tendency to focus on technical questions of design and data adequacy whilst neglecting or ignoring complex issues of epistemological difference and adequacy. It is here, in the type of knowledge or ways of knowing, generated, that qualitative research can make its unique contribution to evidence-based healthcare, but it is also this aspect of qualitative research evidence that is most difficult to explain to those unfamiliar with the 'science' involved.

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