

Generic qualitative research: a design for qualitative research in emergency care?

S Cooper, R Endacott

See end of article for authors' affiliations

Emerg Med J 2007;24:816–819. doi: 10.1136/emj.2007.050641

Correspondence to:
Dr Simon Cooper, Faculty of
Health and Social Work,
C501 Portland Square,
University of Plymouth,
Plymouth, Devon, PL4 8AA,
UK; simon.cooper@
plymouth.ac.uk

Accepted 30 July 2007

The frequency of qualitative studies in the *Emergency Medicine Journal*, while still low, has increased over the last few years. All take a generic approach and rarely conform to established qualitative approaches such as phenomenology, ethnography and grounded theory. This generic approach is no doubt selected for pragmatic reasons but can be weakened by a lack of rigor and understanding of qualitative research. This paper explores qualitative approaches and then focuses on "best practice" for generic qualitative research.

There are qualitative and mixed methods approaches that could inform practice for a wide range of emergency department (ED) issues—for example, patient experiences, the impact of life threatening events on patients and families, mentorship, stress and coping in junior doctors, experience of managing aggression, the "lived" experience of working in an ED, or the culture of the ED community. However, these approaches are largely neglected. As a background review we performed a hand search of all editions of the *Emergency Medical Journal* from January 2001 (following renaming of the journal) to September 2006 (56 months). We included all original articles, short reports and prehospital care research reports in order to identify papers that included quantitative and/or qualitative measures. We excluded letters, case reports, conference abstracts, secondary evidence, best evidence and journal scan. Four hundred and sixty-two papers described quantitative studies, six used mixed methods, and eight were qualitative studies. Most of the studies ($n = 12$) that included qualitative methods were published in the last few years (since January 2004). None of the papers specifically cited the research design other than stating that they were taking "a qualitative" approach or undertaking an evaluation. But further reading often identified "broadly adopted grounded theory models"¹ or an underlying approach which indicated that researchers^{2–4} were drawing from grounded theory methods of analysis such as "constant comparison" and open, axial and selective coding^{5, 6} with the aim of developing an understanding (or theory) of how roles and interventions are developing.

DESIGNS

Research is usually undertaken to test a theory (deductive research) or to develop theory (inductive research). It is possible to use a qualitative approach as part of deductive research—for example, the use of individual or focus group interviews to refine hypotheses for testing. By contrast, inductive research *requires* a qualitative approach to build the theory. Useful examples of qualitative and quantitative approaches used in the same study are provided by Evangelist *et al*⁷ and Fitzsimmons *et al*.⁸

There are a number of traditional methodologies for qualitative research: these are broadly classified as interpretive (grounded theory, ethnography, phenomenology) or critical (action research, feminist research). Interpretive approaches

aim to describe and understand, and the emphasis will determine which methodology is selected. Critical approaches emphasise change, or emancipation, as part of the research process, with participants playing a key role in the design and implementation of the study. The focus of the research, the researcher role and the methods vary according to the methodology (table 1). For example, observation—identified as the "closest to a gold standard" in qualitative research⁹—is the central data collection method in ethnography, whereas in phenomenology it would be used to identify areas of "lived experience" to explore during in-depth interviews.

The area is complicated by the use of terms in different ways by different disciplines. For example, grounded theory may be used by sociologists as a general inductive approach²¹ while a nurse may see it as the specific approach designed by Glaser and Strauss²² and Strauss and Corbin.⁶

Table 1 Distinguishing features of qualitative methodologies

Methodology	Features
Grounded theory ^{10–12}	Used where very little is known about the topic Theory is developed inductively through the data Hypotheses are generated and tested through further data collection Relies on iterative process of data collection and analysis
Ethnography ^{13, 14}	Focus on understanding cultural rules Observation is a central data collection method Observer role includes some degree of participation
Phenomenology ^{15, 16}	Focus on exploring a phenomenon in depth May include the participants' "lived experience"
Action research ^{17, 18}	Aims to bring about change in practice during the research process Uses a spiral process of change and evaluation
Feminist research ^{19, 20}	Equal relationship between researcher and participants in order to: (1) empower women (2) raise consciousness of women's issues

The distinguishing features of these methodologies, however, also (rightly) limit their applicability. Some research studies simply seek to explore the perspectives of those involved in a particular process (for example, parents' perspectives on admission of their child to the emergency department), with no requirement to examine cultural rules (ethnography) or build a theory (grounded theory). This can be particularly pertinent in studies that use mixed methods.

GENERIC QUALITATIVE APPROACHES

A generic qualitative approach is described by Caelli *et al*²³ from the work of Merriam²⁴ as studies that “seek to discover and understand a phenomenon, a process, or the perspectives and worldviews of the people involved”. They argue that researchers using a generic approach should make their theoretical position explicit—for example, what motivates them to undertake the study; that there should be congruence between methodology and methods—that is, methods should be sufficiently described to distinguish between them—for example, if observation is used, is it sufficiently described to distinguish it from ethnographic observation?; that there should be clear strategies to establish rigour; and that the analytic lens through which data are examined should be identified—for example, how has the researcher engaged with the data?

Such approaches are not always “badged” as generic and have been referred to as interpretative description²⁵ and qualitative description.²⁶ Studies of this type tend not to declare allegiance to one of the specific approaches (ethnography, phenomenology, etc) and take a general approach towards clinical issues. For example, Clark *et al*²⁷ looked at patient choices and experiences of cardiac rehabilitation using focus groups; Hornsten *et al*²⁸ considered type 2 diabetics' understanding of illness using narrative thematic interviews; Manias *et al*²⁹ used observation and interviews in a study looking at graduate nurses decision models in the management of patients' medications; and Cooper *et al*^{30 31} also used observation and interviews for a study on interprofessional collaboration in emergency care.

In the accident and emergency (A&E) field qualitative work rarely states or takes a specific design, but is usually focused on general and pragmatic approaches to clinical problems without over concern and preoccupation for methods (known as methodolatry³²). But these approaches need to be strengthened by incorporating the structure suggested by Caelli *et al*²³ and others.^{25 26} We have incorporated these below, suggesting that researchers should clarify procedural issues (reflexivity and methods),^{23 33–35} incorporate applicable procedures for the enhancement of validity and reliability (rigour),^{34 35} and effectively communicate qualitative approaches to quantitative readers.²¹ These issues are discussed below.

KEY CONSIDERATIONS IN GENERIC APPROACHES

With concerns for the creation of a “convincing account” a number of authors^{23 31 33–35} discuss the need for clarity in generic work, arguing that reliability and validity are appropriate concepts for attaining rigour (as opposed to terms such as credibility and dependability); and that quality issues such as respondent validation and reflexivity are important. In the following section we summarise these issues under three subheadings; reflexivity, methods and establishing rigour.

Reflexivity

Reflexivity has been described as “sensitivity to the ways the researcher and the research process have shaped the collection of data, including the role of prior assumptions and experience”.³⁵ In considering and developing this Caelli *et al*²³ argue that it is important for the qualitative researcher to describe

their theoretical position, with specific reference to their “disciplinary affiliation, what brought them to the question and the assumptions they make about the topic of interest”. Mertens⁵ enforces this with her view that to ensure methodological validity or trustworthiness the logic of enquiry, procedures and measurement instruments must be valid and clearly described.

Methods

Methods should be described in full with consideration for the following factors, where applicable.

Sampling

Random sampling is unusual in qualitative research as statistical representativeness is not usually an objective in the understanding of social processes.³⁴ However, the researcher may, for example, decide to select a random sample of paramedics of a certain age for a study of opinions on rapid sequence induction between ambulance trusts. Purposeful sampling would be more common in qualitative research—for example (in a maximum variation form) the difference in practice between emergency care practitioners working in rural, semi-rural and urban populations; or as a stratified purposeful sample, an examination of A&E consultants (within age bands), attitudes to waiting time targets. Snowball sampling is used where the researcher's initial informants recommend additional participants—for example, other stakeholders³¹ and theoretical sampling where multiple samples of a population would inform the development and refinement of theory.⁵

Interviews

In qualitative research interviews tend to be audiotaped and semi-structured or unstructured.^{5 36} They can be conducted individually or as a group, of which the focus group approach is the most common. For example, Mason *et al*³⁷ used semi-structured interviews in their work on the evolution of the emergency care practitioner in England, and Olsson and Hansagi³⁸ used unstructured interviews to elicit patients' stories about their repeated use of the A&E department. Kevern and Webb³⁹ review of focus groups highlights the need for researcher flexibility within what should be a dynamic and developing interview, with a necessity to report and consider interactions with the group. An example within a generic design can be found in the afore mentioned study of cardiac rehabilitation.²⁷

Observation

Observation overcomes the discrepancy between what people say they do, and what they actually do.⁴⁰ Due to ethical considerations covert observation tends now to be unusual and practice tends to range between participant observation and pure non-participant. For example, Timmermans¹⁴ undertook an ethnographic study of staff practices in the resuscitation room, and Cooper and Wakelam⁴¹ video recorded resuscitation attempts in general wards. Interestingly in the UK this latter study would now be unlikely to receive ethical approval as prospective patient consent is normally required. Depending on the objectives of the study, Merriam²⁴ suggests that the setting, participants, activities and interactions, frequency, duration and non-verbal interactions are recorded. Consideration must also be given to gaining access, striking up rapport, the risk of becoming immersed in the group culture and losing the research agenda (“going native”)³⁴ and changes of behaviour due to observation—the Hawthorne effect.⁴²

Analysis

A number of computer programs are available to assist in data analysis (for example, QSR N6) and there is a wide variety of

approaches dependant on the research design. For example, Pope *et al*⁴³ give an overview of qualitative analysis and refer to the “framework approach” to analysis—an approach used by Cross *et al*⁴⁴ in work on rationing in the emergency department. This approach is used where objectives have been set in advance and where specific focused information is required (for example, by the research funding body). Data collection and analysis is therefore deductive in that it needs to be structured and focused.

Other more “standardised” inductive approaches to data analysis are listed by Belgrave²¹—for example, Miles and Huberman.⁴⁵ Such general approaches are applicable to generic research as they are not specifically designed for use with a particular design—for example, grounded theory. Miles and Huberman^{45, 46} indicate the stages of analysis (for interview transcripts or observational records) which we summarise as follows. *Data reduction and display*—researchers should independently read and reread the transcripts (maintaining awareness of their preconceived ideas) and then independently identify key categories which can be charted appropriately. Then *draw conclusions* by identifying category clusters and noting relationships within the data. This will enable the development of overarching themes and sub themes (which should be discussed within the research team). Finally *confirm the results* by weighting the evidence and making contrasts and comparisons. To support and enhance the rigour of the work, consideration should also be given to additional procedures such as the close examination of negative or outlying cases, triangulation and respondent feedback (see below).

Establishing rigour

When considering a generic qualitative study and in order to produce a convincing account, researchers should keep clear and accurate records and describe the research process in detail (the audit trail). This also enables readers to consider the “generalisability” and relevance of the findings to other settings.³⁵ In addition, consideration should also be given to the following approaches to enhance validity and reliability.

Saturation

The inductive nature of qualitative research requires sampling to the point of saturation—the researcher continues to recruit

Box 1: Communication of qualitative findings²¹

- Clearly state the research goals and research questions—point out that as the study is inductive, there are no hypotheses.
- Produce and describe the literature in full. Reviews should include quantitative as well as qualitative studies.
- Make it clear that as the approach is inductive the methods, tools and approaches may have changed as the study progressed.
- Make it clear that the sample may have changed and developed. Qualitative studies are more likely to focus on a social world or phenomenon rather than a specific population.
- Describe the researchers’ reflexivity, the methods, and validity and reliability processes in detail.
- Clearly explain technical language—for example, phenomenology
- If multiple methods are in use, emphasise this and point out the benefits—for example, triangulation.

participants until no new data emerge.¹ Ethics committees usually require an indication of likely recruitment; five to eight participants are usually sufficient for a homogenous sample and 12–20 for a heterogenous sample, where it is important to maximise variation across the sample.⁴⁷ For example, exploring experiences of parents of children admitted to the ED with traumatic injuries would require a larger sample as the group are likely to be heterogenous.

Triangulation

This approach is described as “an approach to data collection in which evidence is deliberately sought from a wide range of different, independent sources and often by different means”.³⁴ This may include, for example, comparing responses in stakeholder interviews or comparisons of results from observational records and interviews.³¹

Respondent feedback

This procedure is also referred to as respondent validation or “member checking” and involves a return to respondents with an account of the provisional findings. These are discussed and adapted accordingly—for example, Smith *et al*⁴⁸ fed back results from interview findings on a Legionnaires outbreak, and Seeley *et al*⁴⁹ returned to respondents for a study on head injuries. Time delays between primary data collection and respondent feedback events, and individual versus the researchers’ global interpretation, may influence this process. However, they do generate new and alternative insights, which in themselves are useful.^{33, 35}

Fair dealing

Mays and Pope³⁵ use this term to explain the need for a wide range of perspectives. This also requires explanation of negative cases to ensure that the majority of views and perspectives have been addressed, which in turn will revise an emerging hypothesis.⁵

Process records and inter-rater reliability

In the above sections we have highlighted the importance of describing the research process in full and the need for a clear category and analysis framework. Such records and approaches can be enhanced with audio and video recording to allow return and review of the data at any point. Interview transcripts and observational recordings can also be reviewed by independent reviewers for consideration of agreement (and disagreement) of emergent findings.

EFFECTIVE COMMUNICATION OF QUALITATIVE RESEARCH

Finally, in the emergency care field quantitative approaches are the norm. It is therefore important that qualitative researchers consider how qualitative (inductive) studies are communicated to a primary quantitative (deductive) trained medical audience. These issues are discussed by Belgrave *et al*²¹ and summarised in box 1.

SUMMARY

There has been little qualitative research in the emergency care field despite its applicability and value. We suggest that specialist qualitative approaches are less applicable for pragmatic clinical researchers who may be better placed to follow a general or generic template. In addition researchers may be best advised not to create an eclectic approach, drawing from specific designs (for example, grounded theory) as this has a tendency to violate design procedures. Generic qualitative researchers should be sensitive to the way they influence and interpret data (their reflexivity), they should closely consider

the sample and analysis processes, choose relevant methods of data collection, and incorporate applicable processes for establishing rigour. Finally, close attention should be paid to the effective description and communication of qualitative findings to those less familiar with the relevant processes. Development of rigorous qualitative approaches will enhance the theory of emergency care through rich in depth descriptions of contextual health care.

Authors' affiliations

S Cooper, R Endacott, Faculty of Health and Social Work, University of Plymouth, Plymouth, Devon, UK

Competing interests: None.

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