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Nurse Researcher

Title: Theoretical versus pragmatic design challenges in qualitative research

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Key Words:

Qualitative research, framework analysis, parent's experiences, hydrocephalus

Abstract

The relative merits of adopting a generic versus theoretical approach to undertaking qualitative research have polarised qualitative researchers and overshadowed the need to focus on research that address clinical questions. Drawing on the challenges of designing a study that explored parents' experiences of living with a child with hydrocephalus, we will argue that over adherence to, and deliberations about, the philosophical origins of qualitative methods such as phenomenology, ethnography and grounded theory is undermining the role qualitative research could contribute to evidence-based healthcare, and suggest qualitative methods should stand alone.

Introduction

For the novice qualitative researcher, designing an enquiry based study aimed at investigating how individuals make sense of and interpret their experiences of health and illness is challenging because of the range and diversity of qualitative methods. In order to make an informed choice about a study's design, appreciating the underlying principles, similarities and differences of the main qualitative methods, and their application to the topic area being investigated is essential (Ritchie and Lewis 2003, Morse and Richards 2002). This is not an easy task; first there does not appear to be a definitive way of classifying qualitative research (Patton 2002). Second, a preoccupation with debates concerning the underpinning epistemological basis of qualitative methodology has overshadowed the need to identify research priorities and develop questions that could enhance nursing practice (Rolfe 1998). Third, the overtly critical stance of some qualitative researchers in relation to the 'academic' standing of generic approaches to undertaking qualitative research is undermining their value (Sandelowski 2000).

Although various terms are used to describe qualitative research that is atheoretical such as 'generic designs' (Holloway and Tordes 2003) and 'descriptive designs' (Sandelowski 2000), for consistency 'generic research' will be used to represent qualitative methods not underpinned by a specified theoretical perspective. This article will evaluate the potential benefits of adopting a generic qualitative approach when designing studies aimed at understanding user and carer perspectives, a key driver within United Kingdom health policy reforms (DH 2001). This will be achieved by sharing personal reflections of the challenges encountered when designing a qualitative study that focussed on parents' experiences of living with a child with hydrocephalus.

Context

Hydrocephalus is a long-term condition normally identified in early childhood characterised by excess cerebrospinal fluid in the ventricles of the brain. The main treatment for hydrocephalus is the insertion of a permanent ventricular shunt, which diverts the excess fluid from the ventricles to the peritoneum. Ventricular shunts have

high complication rates, particularly shunt malfunction, with most children requiring at least one shunt revision (Tuli et al 2004). Caring for the child with hydrocephalus includes ensuring parents' have the skills to recognise acute changes in their child which might indicate possible shunt malfunction. The similarity of the presenting symptoms of shunt malfunction such as headache, vomiting, drowsiness and irritability are the same presenting symptoms of many childhood illnesses. Consequently children have frequent admissions to hospital for potential shunt malfunction, which can be disruptive for the child and family.

These issues, along with a paucity of published research relating to the impact of hydrocephalus for the child and family, provided the impetus to undertake the study aimed at exploring and understanding parents' experiences and perceptions of living with a child with hydrocephalus. A qualitative design was relevant because qualitative methods offer ways to gain insights about individual experiences and the construction of meaning (Patton 2002). Although adopting a qualitative approach was appropriate to meet the study aims, choosing an appropriate design within the range of qualitative research paradigms was challenging.

Qualitative research: design challenges

Qualitative research is a generic term that refers to group of methods and ways of collecting and analysing data that are distinctly different from quantitative methods because of the absence of quantification and statistical analysis. Qualitative methods are ideal to explore topics where little is known, make sense of complex situations, gain new insights about phenomena, construct themes in order to explain phenomena, and ultimately foster a deep understanding of the phenomena (Morse and Richards 2002). Within healthcare qualitative methods are appropriate for exploring the complexities of social, economic, political and environmental factors that affect health and well-being. Research questions that may be difficult to answer by the manipulation of variables include: understanding patients' experiences of health and illness, interactions with healthcare professionals and services; and organisational cultures and professional roles (Barbour 2000). In addition qualitative methods can enhance quantitative methods

particularly clinical trials through understanding patient decisions, explaining unusual responses to treatments and in the generation of new hypotheses.

Qualitative research is characterised by adopting methods which are interpretative and focus on meaning (Morse and Richards 2002). Data collection is undertaken in the natural setting with the depth of the data more important than recruiting large samples. Data analysis is an inductive process with the explicit aim to describe and interpret the range of attributes associated with the phenomena being studied (Ritchie and Lewis 2003). Although there are commonalities, qualitative research incorporates a diverse range of methods with different ontological and epistemological underpinnings, perspectives and purpose. The diversity of methods results in the researcher having a range of designs and analytical strategies to choose from. However, this diversity, with over forty methods having been identified, can be challenging when identifying an appropriate qualitative method that meets a study's aims (Tesch 1990).

The challenges of identifying an appropriate qualitative design include distinguishing between similar methods and becoming over immersed in the epistemological underpinnings of the chosen method rather than focusing on meeting the study aims (Sandelowski 2000). An understanding of the main qualitative research designs is essential in order to ensure decisions are based on an informed choice. One way of understanding qualitative methods is to consider the overall purpose of the method, which can be divided into three broad groups; the use and meaning of language, describing and interpreting participants' views, and developing theory (Tesch 1990). Socio-linguistic methods that explore the use and meaning of language include discourse analysis (Potter and Wetherell 1987) and conversation analysis (Schegloff 2007). Describing and interpreting participants' views are features of qualitative approaches such as phenomenology, qualitative content analysis and thematic analysis, and are common methods for exploring lived experiences. The overarching aim is to understand the unique meaning and significance of phenomenon as experienced by the participants. Methods that focus on developing theory are typified by grounded theory (Glaser and Strauss 1967).

An alternative way of understanding qualitative research is to consider the methods used to undertake the analysis, which again can be categorised into three broad groups: quasi-statistical approaches, the use of frameworks or matrices, and interpretative/immersion approaches (Crabtree and Miller 1992). This typology reflects the nature of research in terms of the degree of subjectivity or objectivity by placing interpretive approaches at one end of a continuum and deductive approaches at the opposite end, figure 1.

Insert figure 1

Qualitative nurse researchers commonly subscribe to, often to the exclusion of considering alternatives, the methodologies of ethnography, grounded theory or phenomenology (Sandelowski 2000). These methods are well established and rooted in the philosophies of social sciences disciplines such as anthropology, sociology and psychology. With the increasing value placed on qualitative research within social sciences disciplines there has been refinement and further developments in qualitative research, both in application and methods (Patton 2002, Ritchie and Lewis 2003). It has been postulated that as qualitative inquiry evolves and its application across health and social sciences increases, the methods of undertaking qualitative research should stand alone without having to be underpinned by, or having a definite allegiance to, a specific philosophical stance (Patton 2002). As researchers adopt generic approaches to undertaking qualitative research, predictably, arguments about their relative merits and comparisons to theoretical approaches have emerged.

The polarisation of qualitative nurse researchers: generic versus theoretical approaches

Debates about the relative merits of undertaking qualitative research with or without a specific theoretical methodology appeared to have polarised nurse researchers. Traditionalists advocate there is no place for qualitative research that is not driven by a clear theoretical framework (Reeves et al 2008). It has been implied that qualitative

research devoid of a theoretical framework results in a lack of methodological coherence which potentially affects a study's validity (Morse et al 2002, Rolfe 2004). Conversely poor understanding, and therefore application, of the theoretical underpinnings of ethnography, grounded and phenomenology may have contributed to the devaluation of qualitative methodologies (Baker et al 1992, Paley 1997, Maggs-Rapport, 2001). However, poor practice is not a justifiable reason for abandoning theoretical approaches. Theoretically driven research is invaluable in a range of health care contexts such as explaining organisational cultures, and professional and patient behaviours (Reeves et al 2008).

Adopting a specified theoretical methodology has been described as an attempt to seek 'epistemological credibility' (Thorne et al 1997, page 170) and legitimise nursing research within a health care culture where quantitative research has traditionally dominated (Sandelowski 2000, Patton 2002). The practice of combining theoretical methodologies, often referred to as method slurring, is an example of seeking academic credence. However, mixing methods often has no clear rational resulting in incongruence between a study's aims, design and data analysis (Baker et al 1992, Paley 1997, Sandelowski 2000). The rigorous application of theoretical methods can lead to poor representation of participants' views because final interpretations are often presented as abstract concepts far removed from the data, leading to misunderstanding and assumptions within the findings (Clarke 1992).

One of the criticisms levelled at generic approaches is the belief they are not specific methodologies but methods of undertaking analysis (Braun and Clark 2006). Yet, the process of generating meaning through grouping data into themes (thematic analysis) is one of the core skills qualitative researchers require and the bedrock of the majority of theoretical approaches in particular grounded theory and phenomenology (Holloway and Tordes 2003). Despite the diversity of approaches and range of terminology used to describe methods of data analysis, thematic analysis is the most widely used analytical methods in qualitative research (Braun and Clark 2006). In common with other generic approaches it has been suggested that thematic analysis should be considered a

methodology in its own right without having allegiance with qualitative traditions such as grounded theory (Braun and Clark 2006).

Over immersion in the epistemological and ontological perspectives underpinning the chosen methodology can result in theoretical perspectives becoming the dominant focus of the research, rather than the research question posed (Sandelowski 2000). Adopting a generic qualitative research approach can assist in ensuring data collection methods and analytical strategies best suit the research question posed rather than trying to fit the question to a particular philosophical stance (Ritchie and Lewis 2003, Patton 2002, Morse and Richards 2002). Adopting a generic qualitative approach can enhance the credibility of a study's findings because the researcher is more likely to be concerned with; accurately describing participants' experiences, staying close to the data, and ensuring their own interpretations are transparent, compared to researchers who adopt a theoretically based approach (Sandelowski 2000). The credibility of the research will depend on; obtaining an appropriate sample, ensuring data collection techniques are consistent with the purpose of the study and having clear strategies for data analysis (Sandelowski 2000). Despite the polarisation of qualitative researchers into those for and those against research without a specific theoretical methodology, there appears unanimous agreement that the issue of quality is central to the credibility of qualitative research (Rolfe 2004, Braun and Clark 2006, Holloway and Tordes 2003, Morse et al 2002).

Deciding on an approach that met the research question

Considering the debates about the value of theoretical versus generic research added to the challenges when considering an appropriate study design. The common qualitative research approaches were considered in relation to their potential application to understanding the nature of hydrocephalus from the family's perspectives. In addition, alternative questions were developed to aid further understanding of the different approaches to undertaking qualitative research, table 1.

Insert table1

Reflecting on the underpinning theoretical perspectives of phenomenology, ethnography and grounded theory culminated in the decision that adopting one of these approaches would not enhance the study in terms of achieving the study's aims and objectives. For example grounded theory is a widely used qualitative approach, based on the assumption that there are commonalities in the way individuals with similar circumstances make sense of their social world and therefore was considered a possible approach for this study. Grounded theory explores social processes that occur within human interactions and is concerned with the process of the interaction rather than describing the interaction. Consequently the purpose of grounded theory is principally to develop theory relating to social process and is particularly relevant when a topic area has no theoretical underpinnings

Generating theory was not an explicit aim of the study because a range of theoretical models exist that explain how individuals and families respond to illness or illness symptoms such as health belief models, family systems theories, and decision-make in the context of meeting health needs. In addition, grounded theory has been criticised for not representing the whole picture because examples of participants' views are abandoned if not supported in subsequent interviews (Clarke 1992). Representing views from a range of participants was explicit within the study's aims because it was recognised that parents' experiences may be influenced by: the severity of the child's condition usually related to the cause of hydrocephalus, time since diagnosis, the frequency of shunt complications, and the age of the child.

A decision to adopt a cross-sectional interview-based design, underpinned by the general principles of qualitative methods, was reached after much reading and reflecting on the qualitative research literature and discussions with experienced researchers. Ultimately, the overall aim of qualitative research as a means of describing, debating and offering insights into a phenomenon by building up a complex, holistic picture was deemed important. The design was guided by the qualitative methods advocated by Ritchie and Lewis (2003) and Morse and Richards (2002). The underpinning principles of their approach to undertaking qualitative research are based on the interrelated

concepts of interpretivism and reflexivity balanced with pragmatism and transparency, which can be achieved by:

- Having a desire to understand complex issues and the application of analytical strategies to find meaning;
- Understanding the importance of participants' perspectives in the context of their lives, and representing participants accounts accurately;
- Employing methods that are appropriate to answer the question, rather than fitting the questions to a particular methodological approach;
- Clearly delineating between researcher interpretations and individual participant's descriptions while recognising deeper insights can be gained from synthesising and comparing participants accounts;
- Reflecting on and acknowledging personal values and beliefs that may influence or bias the study;
- Being open to scrutiny in order to demonstrate transparency.

The qualitative method that underpinned the data analysis was the framework approach because it was designed primarily for the analysis of cross-sectional descriptive data (Ritchie and Lewis 2003). The framework approach appears to be gaining popularity with health care researchers (Pope et al 2000, Mulvaney et al 2006, Prost et al 2007), because it explicitly describes the processes that guide qualitative data analysis within a framework of interconnected stages systematic (table 2) (Patton 2002, Pope et al 2000).
Inset table 2

The framework approach is based on thematic analysis, which aims to develop meaningful themes which represent participants' accounts (Braun and Clarke 2006). Data analysis is an interpretive process, where data are systematically searched and analysed in order to provide an illuminating description of the phenomenon without explicitly generating theory. Unlike thematic analysis which can result in fragmentation of the phenomena being studied, the framework approach is not a linear process and has a greater emphasis on moving back and forth across the data until a coherent account emerges (Ritchie and Lewis 2003). In addition framework approach appears to

have greater emphasis on explanatory accounts where themes are constantly refined, which may lead to the development of a conceptual framework.

Conclusion

There is a place for both theoretically driven and generic qualitative research within the current health care research agenda. Unfortunately, generic qualitative research approaches that aim to accurately describe a patient's experience are often viewed as a less credible form of research. However, this type of descriptive research is essential if health care policy is to be met in relation to valuing and understanding users' and carers' perspectives of their health care. Debates about the value of theoretically driven research could be resolved by clearly distinguishing between research that directly relates to clinical practice and patient care, and research that focuses on generating and testing theories.

Qualitative research typically employs methods which are flexible and sensitive to the social context of the phenomena being investigated, recognising that multiple truths exist. Qualitative approaches are particularly appropriate to explore complex issues for which there is little known in order to gain new insights and gain a deep understanding in relation to the individual who has experience of the phenomena. Choosing an appropriate research approach is challenging and requires the novice researcher to balance the advantages and disadvantages of the main approaches, and make a decision based on the specific intent of their own study. Choices will depend on whether the main focus is within the paradigm of qualitative research and looking through a particular lens or the focus is health service research and finding the best method to address the problem. In the later researchers should be confident that qualitative methods can stand alone without being underpinned by a specific epistemology.

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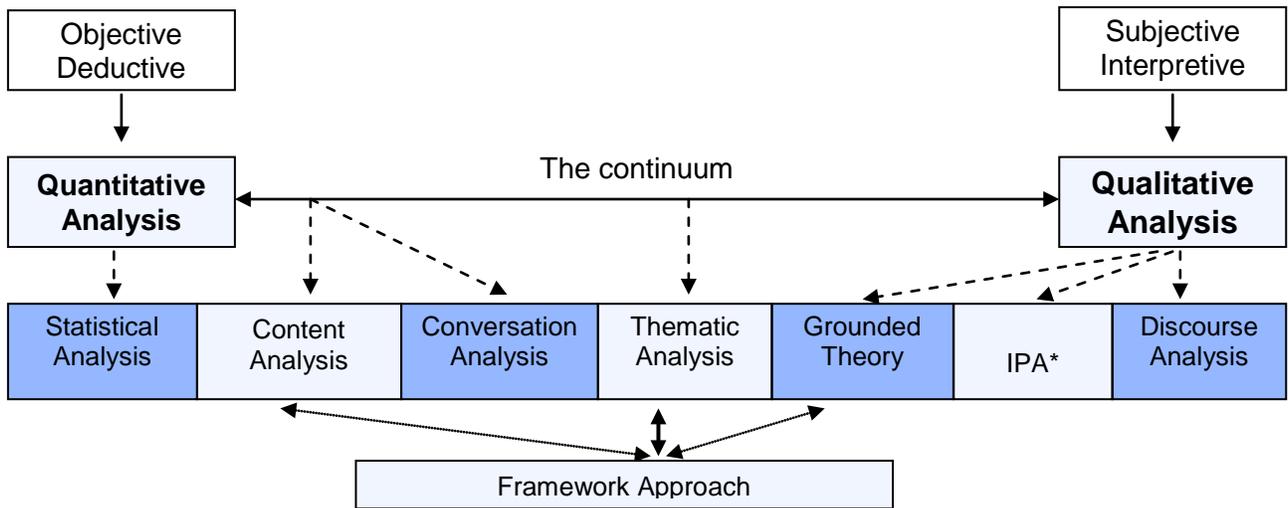
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Figure 1: The relationship between qualitative methods and quantitative analysis



*Interpretative phenomenological analysis

Table 1: Comparison between three approaches to qualitative research and their application to understanding childhood hydrocephalus from the child and family's perspectives

Approach	Key features	Application to understanding the nature of childhood hydrocephalus from the child and family's perspectives
<p>Ethnography Philosophical roots in anthropology A relevant framework for describing and understanding a social or culture group or system</p>	<p>Explores the meaning individuals place on the beliefs and values of their cultural group; Considers interaction, actions and events within the system; Data collected through emersion into the system</p>	<p>Children with hydrocephalus can be viewed as a social group. A possible research question in relation to understanding the nature of hydrocephalus through an ethnographical lens could be: <i>Do children with hydrocephalus have the same opportunities for social development as children without hydrocephalus?</i> Adopting an ethnographical approach would not have address the focus of the study which was to understand parents experiences of living with a child with hydrocephalus and specific objectives such as how parents learn about shunt management and associated complications.</p>
<p>Grounded theory Philosophical roots in a variety of disciplines, but primarily sociology A relevant framework for developing theory</p>	<p>Explores social processes that occur within human interactions; Principle aim is theory development rather than describing the social process; Data often collected through interviewing but a range of data collection methods can be used</p>	<p>Grounded theory could be used to explore parent's experiences of living with a child with hydrocephalus. A possible research question in relation to understanding the nature of hydrocephalus through a grounded theory approach could be: <i>How do parents make decisions about their child's health needs when their child has hydrocephalus?</i> Adopting a grounded theory approach could address one of the specific objectives of the study in terms of parents' decision making when their child is ill but would not address the broad aims of the study relating to understanding parent's experiences. There are a range of theoretical approaches that can be utilised to explain illness behaviours, such as health beliefs, illness roles, adaptation and coping, family systems theories and theories relating to decision making and generating theory was not an explicit aim of the study.</p>
<p>Phenomenology Philosophical roots in a variety of disciplines, but primarily psychology A relevant framework for understanding the lived experiences of participants</p>	<p>Exploration of phenomena in order to understand its unique meaning and significance by those experiencing it; Understanding achieved through language, data usually obtained through interviewing; The researcher describes and attempts to interpret participants accounts of the phenomena</p>	<p>A phenomenological approach could be used to develop an understanding of the unique meaning and significance of living with a child with hydrocephalus as experienced by parents. A possible research question in relation to understanding the nature of hydrocephalus through a phenomenological lens could be: <i>What are the lived experiences of parents who have a child with hydrocephalus?</i> The overall aim of the study, to explore and understand parents' experiences and perceptions of living with a child with shunted hydrocephalus could be achieved using a phenomenological approach. Implicit within phenomenology is the need uncover the meaning of a phenomena experienced and described by the participants, unstructured individual interviews are usually undertaken to enable the individual to describe the phenomena in term of its meaning to them. This approach would not meet the specific objectives of the study such as how parents learn about shunt management and associated complications, and their decision-making when they seek help for their child if shunt malfunction is suspected.</p>

Table 2: Overview of framework approach (adapted from Ritchie and Lewis 2003)

Stage	Components	Continuum 
Data management	<ol style="list-style-type: none"> 1. Verbatim transcription of the interview data 2. Familiarisation of the data through a process of reading and re-reading the transcribed interview 3. Indenting initial key concepts or themes and sub categories from which data can be organised 4. Develop a coding index using initial themes and categories 5. Assign data (label/ code) to the themes and categories 	
Descriptive accounts	<ol style="list-style-type: none"> 1. Summarise and synthesis the range and diversity of coded data by refining initial themes and categories 2. Identifying key dimension of the synthesised data: detecting association between the themes until the 'whole picture' emerges 3. Developing more abstract concepts (core concepts) 	
Explanatory accounts	<ol style="list-style-type: none"> 1. Identify and develop associations/ patterns within concepts and themes 2. Reflect back on the original data as a whole and analytical stages in order to ensure the perceptions of parents are accurately reflected and reduce the possibility of misinterpretation 3. Interpret/ find meaning and explain the concepts and themes and categories 4. Seek wider application of concepts and themes 	