

HOW TO RECOGNISE A 'QUALITY' GROUNDED THEORY RESEARCH STUDY

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ABSTRACT

Background:

The quality of a research study is a key issue for clinical practitioners committed to the delivery of 'best-practice' patient care. With the increasing use of grounded theory in nursing research, attention is now focusing on the quality of studies using this research methodology. Indeed, within the growing body of grounded theory in nursing some methodological problems are emerging that raise questions about the quality of the research.

Aim:

This paper recognises that clinical practitioners need to be critical readers of grounded theory research, so that they recognise 'quality' research studies and can develop their clinical practice based on sound research findings.

Conclusion:

Grounded theory should be viewed as a package of research methods that includes the use of concurrent data collection and constant comparative analysis, theoretical sampling and memoing, all of which can create an awareness and an appreciation of the scientific merit required of grounded theory research and promote quality standards relating to research practices in grounded theory methodology.

INTRODUCTION

The quality of research studies is a key issue for clinical practitioners committed to the delivery of 'best-practice' patient care. With the increasing use of grounded theory in nursing research, attention is now focusing on the quality of studies using this research methodology.

The evidence suggests that there are problems with how the research methods are being used and this raises concern regarding the credibility of grounded theory studies in nursing (Wilson and Hutchinson 1996; Benoliel 1996; Becker 1993). As consumers of research, clinical practitioners need to be able to evaluate grounded theory studies in order to make decisions about whether to apply the research findings to the delivery of patient care. When reading published grounded theory research, nurses and midwives need to know how to recognise a 'good' quality research study and understand grounded theory in terms of how the methods used can impact on the quality of research findings.

While there have been numerous developments in the area of research quality resulting in a range of different criteria against which the standard of research can be judged, it is unclear which criteria should be used. However, more recent developments suggest that those who read and conduct research need to engage the quality issue at a more practical level by considering how the research methods themselves can contribute to the quality of the research study. In relation to grounded theory, this requires that nurses identify essential features of grounded theory research and the link between the research methods and the quality of the research study.

Grounded theory and nursing research

Grounded theory is a general research method, which provides for the systematic generation of theory from data acquired by a rigorous research method (Glaser and Strauss 1967). The co-originators, Barney Glaser and Anslem Strauss, developed grounded theory in the 1960's

while researching dying patients in hospitals. The publication of *'Awareness of Dying'* in 1965 provided the first account of the grounded theory methods and marked the introduction of this research approach as an alternative to other more established research approaches.

With its origins in sociology, grounded theory emphasises the importance of developing an understanding of human behaviour through a process of discovery and induction rather than from the more traditional quantitative research process of hypothesis testing and deduction. A grounded theory approach provides nursing with a viable means of generating theory about dominant psychosocial processes that present within human interactions, indeed, theory that is grounded in the realities of everyday clinical practice (Streubert-Speziale and Carpenter 2003).

Since its introduction in the 1960's, grounded theory is increasingly being used in research practice, particularly in nursing research. Glaser and Strauss began their collaborative work in the University of California to help guide nurse students in their research. Since then, grounded theory has been used to study a wide range of issues in different practice settings such as: clinical judgement in mental health nursing (Martin 1999); experiences of men during their partner's pregnancies (Donovan 1995); the quality of nursing care in acute-care hospitals (Irurita 1996); managing depression among black West Indian Canadian women (Schreiber et al 1998); and, restructuring life for fire victims (Stern 1996).

the data analysis at the end of the data collection while others failed to differentiate between theoretical and purposeful sampling. Whilst it is recognised that grounded theory methods can be used to analyse a variety of research from differing paradigms, research claiming to be a grounded theory study must follow specific grounded theory methodology. Moreover, Benoliel (1996) is also critical of the use of grounded theory in nursing research. In a review of 146 grounded theory abstracts published between the years 1990-1994, Benoliel found that over 50% of studies claiming to use grounded theory are in her view, not applying it. This has led Benoliel to the conclusion that many nurses appear to equate grounded theory with more qualitative research methods in general, and do not understand the distinctive features of grounded theory that differentiates it from other research approaches. An important lesson that can be learnt from the work of Becker (1993) and Benoliel (1996) is that one cannot accept published grounded theory uncritically or assume that because a research study is published this automatically gives it a quality award.

Criteria for assessing quality of research

One approach to assessing the quality of a research study involves the use of criteria, which are the accepted standards for 'best research practice' against which a study is judged. However, within the research literature several different sets of criteria are emerging (see table 1). This raises questions as to which criteria should be used when evaluating a grounded theory study.

Table 1: Criteria for assessing quality of research

Quantitative criteria	Qualitative criteria	Universal criteria	Original grounded theory criteria	Strauss & Corbin's grounded theory criteria
<ul style="list-style-type: none"> • Validity • Reliability <p>(Sheldon 1994)</p>	<ul style="list-style-type: none"> • Credibility • Transferability • Dependability • Confirmability <p>(Lincoln and Guba 1985)</p>	<ul style="list-style-type: none"> • Validity • Relevance <p>(Hammersley 1992)</p>	<ul style="list-style-type: none"> • Fit • Work • Relevance • Modifiability <p>(Glaser and Strauss 1967)</p>	<p>Two sets of criteria:</p> <ul style="list-style-type: none"> - Research Process - Empirical grounding of findings <p>(Strauss and Corbin 1998; Corbin and Strauss 1990)</p>

This rather diverse literature base reveals that grounded theory is applicable to a wide variety of issues relevant to clinical practice and that it can make an important contribution to the development of a theoretical base for clinical nursing and midwifery practice.

However, within the growing body of grounded theory in nursing some methodological problems are emerging that raise questions about the quality of the research (Wilson and Hutchinson 1996; Benoliel 1996; Becker 1993). Becker's (1993) analysis of published grounded theory studies, identifies the methodological problems of researchers borrowing parts of grounded theory and not adhering to the critical components of this approach. For example, Becker found that some researchers carried out

There appears to be no international or nationally accepted definition of 'best' research practice. However, table 1 highlights Sheldon's (1994) suggestion that there are a number of desirable attributes which might be taken as evidence of 'best' or effective research practice which include: validity, reliability and so on. The debate concerning 'best' practice is one that views at one end of a continuum the positivist model which has at its basis the assumption that 'objective' facts can be established, while the other end views a phenomenological model (Lincoln and Guba 1985) taking the social world as being constructed by human beings. Both ends of the continuum produce research strategies such as qualitative and quantitative methodologies that are likewise in opposition.

Quantitative measures include methods such as the randomised control trial or quasi-experimental design, and the large-scale survey while qualitative methods include ethnographies and approaches that seek to interpret and conceptualise such as participant and non-participant observation, un-structured and semi-structured interviews, focus groups and interviews, and content analysis. With this continuing debate many nurse researchers find it difficult to decide the extent to which the findings from both of these methodologies are compatible or comparable.

In grounded theory the issue becomes more complex as two different criteria are proposed, each reflecting the methodological and epistemological differences between Glaser's approach to grounded theory and Strauss and Corbin's approach. However, there is one important pitfall that relates to the use of research specific criteria. That is, the research should be evaluated by the very constructs that were used to generate it. So, for example, whilst grounded theory criteria provide a methodologically related approach to evaluating the quality of a grounded theory study, as Miller and Fredericks (1999) point out, this could result in the evaluation becoming a circular issue. An alternative approach would be that all qualitative research is open to evaluation by criteria that are used for other scientific research. It is proposed that the universal criteria developed by Hammersley (1992) are used for all scientific work including quantitative and qualitative research studies. This more recent proposal of using universal criteria is gaining recognition and currently is being recommended for use by organisations responsible for commissioning research (Murphy et al 1998).

While the criteria debate is ongoing and may never reach a consensus, Long and Johnson (2000) suggest that researchers need to focus on the research methods instead of focusing on generating new criteria or terminology. In the context of grounded theory research and the problems identified by Becker (1993) and Benoliel (1996), the challenge for nurse researchers is to engage the quality issue at a more practical level of considering how grounded theory research methods themselves can be used to assure quality in research. Whilst criteria are part of the discussion on research quality, it is argued that it is more important to consider the research methods themselves from the perspective of quality in research. This means that researchers need to identify the essential components of grounded theory such as: concurrent data collection and constant comparative analysis; theoretical sampling; memoing; and, more importantly, to understand how these research methods impact on the quality of the research.

Essential features of grounded theory

According to Glaser, it is important to understand grounded theory as a package of research methods, which includes '...data collection, coding and analysing through memoing, theoretical sampling and sorting to writing, using the constant comparative method' (Glaser 1998,

p.12). This means that the methods of sampling, data collection and data analysis should not be considered as separate procedural steps in the research process but instead need to be considered as a continuous cycle of data collection, analysis and sampling.

An essential feature of grounded theory research is the continuous cycle of collecting and analysing data. The researcher starts analysing data as soon as it is collected and then moves on to compare the analysis of one set of data with another. As the research progresses and categories are developed, the researcher uses a form of analysis known as selective coding. This means that the researcher reviews the collected data by checking out whether the newly developed categories remain constant when the data is analysed specifically for these categories. As the research progresses, the researcher continues to review the categories as further new data is collected, so as to ensure that data is not being forced into the categories but rather that the categories represent the data. This dynamic relationship between data collection and analysis enables the researcher to check if preliminary findings remain constant when further data is collected. Taken together, constant comparative analysis and data collection offer the researcher an opportunity of generating research findings that represent accurately the phenomena being studied.

Theoretical sampling is generally accepted as a critical feature of grounded theory (Webb 2003; Becker 1993). However, theoretical sampling must be understood in its association with data analysis. Theoretical sampling is defined as:

'...the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyses his [sic] data and decides what data to collect next and where to find them, in order to develop his [sic] theory as it emerges' (Glaser and Strauss 1967, p.45).

This means that the decisions regarding what data to collect are determined by the specific requirements of the theory that is emerging out of the data analysis. In other words, data analysis informs subsequent data collection and sampling. It is important that theoretical sampling is differentiated from purposive sampling (Cutcliffe 2000; Becker 1993).

The distinctive feature of theoretical sampling is its function, which is to ensure that the newly developed theory is theoretically complete. As the research progresses, theoretical sampling will guide the questions used to collect data and indeed the sources of data, so as to ensure the theory is developed fully. This also has implications for the researcher preparing a research proposal insofar as the questions used for data collection or the sampling strategy cannot be pre-determined before the grounded theory research begins, but can emerge only from the data analysis.

Another important feature of grounded theory research method associated with the data analysis is that of

memoing. Glaser (1998; 1978) suggests that the writing of theoretical memos is a core activity throughout the grounded theory research process. Theoretical memos are defined as the following:

'Memos are the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding' (Glaser 1978, p.83).

This means that the researcher writes down ideas which arise during the data analysis. Memos are used to record the meaning of conceptual ideas and to record ideas for theoretical sampling. These memos provide a track record of the analysis and eventually are used as the analytical building blocks from which the new theory is developed. One reason why writing memos is considered important is that it encourages analysis that is grounded in the data because the researcher must consider how the codes and their properties relate to each other and provide evidence of this from the data. Glaser argues that this form of comparative reasoning undoes *a priori* assumptions because it forces the researcher to keep focusing on the data.

Quality issues

When considering the issue of quality in research, Hammersley (1992) suggests that an important question to ask is whether the research findings represent accurately those features of the phenomena it is intended to describe and explain. According to Murphy et al (1998), one way of answering this question is to look at the research methods used and consider the extent to which the likelihood of error has been limited.

It is recognised that grounded theory is open to the possibility of error in similar ways to other qualitative research approaches. One possible error is that the researcher misinterprets the data, so that the accuracy of the emergent theory is threatened. Within a qualitative research tradition the researcher usually relies on respondent or member validation as a way of checking the researcher's interpretation of data. Member validation involves the researcher returning to the participants and checking the accuracy of individual interview transcripts with participants or checking that the researcher's interpretation of the data represents what they said or their experiences (Seale 1999). While member validation may be considered the 'gold standard' in qualitative research, it introduces an additional and separate method into the research process, one which the researcher may opt not to use. Whereas in grounded theory, checking is built into the research process and is seen as an integral part of constant comparative analysis and theoretical sampling. It is used as an ongoing process throughout the research, which is clearly different from it being used as a distinct exercise of checking the research findings after the analysis has been completed.

DISCUSSION

Our picture of grounded theory is therefore one of a dynamic relationship between sampling and analysis which enables the researcher to check that emerging findings remain constant as further data is collected. Glaser (1978) refers to this as developing an 'emergent fit', which requires the researcher to be prepared to modify generated categories so that the new data is adapted into the emerging theory.

This inductive approach to generating theory allows for the continuous process of checking emerging categories and their properties by gathering new evidence. Seale (1999), having critically analysed the different methods of respondent validation, cautions against over-reliance on traditional methods of respondent validation and instead, highlights the importance of the researcher's '... readiness to revise claims in the light of what is revealed, rather than confirming mutual value positions between the researcher and researched, [so that] it can enhance the credibility of the research report, giving it greater sophistication and scope'(p.71). This clearly, is consistent with grounded theory research and can be achieved by the use of concurrent data collection and analysis, and by developing an emergent fit, so that the emergent theory can represent accurately the respondents' experiences.

An important feature of grounded theory is that it does not require that the researcher return to the original participants to check if participants agree with the researcher's interpretation of data. The progressive nature of theoretical sampling and constant comparative analysis suggests that the researcher moves on to involve other groups or people who have different experiences to see if the findings hold as new data is collected. While the primary purpose of respondent validation is to counter the effects of researcher bias and subjective interpretation during analysis, it is now recognised that respondent validation cannot be accepted as an absolute test of the accuracy of research findings (Murphy et al 1998). One of the problems with respondent validation is that it produces yet another layer of data, which again needs to be analysed. It is generally accepted that the methods of respondent validation, whilst intended to counter subjectivity, are themselves open to problems that limit the extent to which the accuracy of the research findings can be assured (Seale 1999; Sandelowski 1998, 1993). Therefore, the value of the grounded theory methods of constant comparative analysis and theoretical sampling is that they provide an integrated research approach to data collection, analysis and checking the quality of research findings.

Another general approach to enhance confidence in interpretative research findings is by providing evidence of how the researcher's own *a priori* assumptions may have shaped the data collection and analysis (Murphy et al 1998). Unlike phenomenology's use of bracketing (Maggs-Rapport 2001) or qualitative research's use of

reflexivity (Alvesson and Skoldberg 2000; Long and Johnson 2000; Hammersley and Atkinson 1995; Porter 1993), grounded theory addresses the issue of subjectivity through the research method of memoing.

During constant comparative analysis the researcher may experience what Glaser calls '...non-grounded ideas occurring from personal biases, personal experiences of an idiosyncratic nature' (Glaser 1998, p.182). In grounded theory the use of memoing is important in controlling distortion during analysis by sensitising the researcher to her/his personal biases. In addition to demonstrating that the researcher is aware of personal biases, memoing provides another important function in controlling the quality of data analysis. Through the use of memoing and comparative analysis the researcher is able to check if the memos fit into the emerging theory and as Streubert-Speziale and Carpenter (2003) point out, memos that do not fit are set aside. This means that in grounded theory, memoing has a dual purpose of being part of data analysis and also in countering subjectivity that ultimately enhances the likelihood of producing accurate research findings.

CONCLUSION

Grounded theory as a method traditionally uses an inductive strategy that attempts to identify the underlying structure in what people do and say. From a nursing perspective this is extremely important as the method allows the researcher to engage the clinical practicum in an attempt to discover and construct a meaningful account of the phenomena in question. A grounded theory approach, therefore, provides nursing with a viable means of generating theory grounded in the realities of everyday clinical practice. However, clinical practitioners need to be critical readers of grounded theory research, so that they recognise 'quality' research studies and can develop their clinical practice based on sound research findings.

Grounded theory needs to be understood as a package of research methods that includes the use of concurrent data collection and constant comparative analysis, theoretical sampling and memoing. These methods are not optional extras but instead are an integral part of the systematic and rigorous research approach of grounded theory. This paper will hopefully stimulate and promote dialogue among clinical practitioners in their quest for good examples of published grounded theory by asking the critical question 'what makes for a quality grounded theory research paper?' The challenge now for critical readers of grounded theory research is to use the criteria of concurrent data collection and constant comparative analysis, theoretical sampling and memoing as part of this process. This can create an awareness and an appreciation of the scientific merit required of grounded theory research and promote quality standards relating to research practices in grounded theory methodology.

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