

Rigour and grounded theory research

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Background. Grounded theory methodology is a suitable qualitative research approach for clinical inquiry into nursing practice, leading to theory development in nursing. Given the variations in, and subjectivity attached to, the manner in which qualitative research is carried out, it is important for researchers to explain the process of how a theory about a nursing phenomenon was generated. Similarly, when grounded theory research reports are reviewed for clinical use, nurses need to look for researchers' explanations of their inquiry process.

Aim. The focus of this article is to discuss the practical application of grounded theory procedures as they relate to rigour.

Method. Reflecting on examples from a grounded theory research study, we suggest eight methods of research practice to delineate further Beck's schema for ensuring, credibility, auditability and fittingness, which are all components of rigour.

Findings. The eight methods of research practice used to enhance rigour in the course of conducting a grounded theory research study were: (1) let participants guide the inquiry process; (2) check the theoretical construction generated against participants' meanings of the phenomenon; (3) use participants' actual words in the theory; (4) articulate the researcher's personal views and insights about the phenomenon explored; (5) specify the criteria built into the researcher's thinking; (6) specify how and why participants in the study were selected; (7) delineate the scope of the research; and (8) describe how the literature relates to each category which emerged in the theory.

Conclusions. The eight methods of research practice should be of use to those in nursing research, management, practice and education in enhancing rigour during the research process and for critiquing published grounded theory research reports.

Keywords: qualitative research, grounded theory, reliability, validity, nursing research, methodology, theory development

Introduction

Grounded theory is one of the qualitative research approaches suited to the purpose of theory development (Strauss &

Corbin 1990, 1994, Glaser 1995, 1999, Charmaz 2000, Parse 2001). In grounded theory, 'theory comes from the data...[and] at no time does the investigator attempt to impose a theory from another study onto the data' (Stern

1985, p. 150). This means that data from participants determine: (a) what is explored in the research; (b) the literature searched; (c) the research question developed; and (d) the number of participants in the study (Stern 1985, Cutcliffe 2000). This is one of the reasons why those conducting grounded theory research need to explain their inquiry process when developing a theory (Lincoln & Guba 1985). Another reason for explaining the inquiry process is that qualitative methods are not uniformly agreed upon (Peshkin 1988, 1993, Solitis 1989, Morse 1999a, 1999b, Cutcliffe 2000, Whitemore *et al.* 2001). In grounded theory, there is more than one version of how researchers can go about implementing procedures (Glaser & Strauss 1967, Miles & Huberman 1984, Lincoln & Guba 1985, Strauss & Corbin 1990, 1994, Glaser 1992, Robrecht 1995, Melia 1996, Seale 1999, Charmaz 2000, Cutcliffe 2000). For example, Grove (1988) compared and contrasted two versions of the constant comparative method for analysing data in grounded theory. Although a researcher may use different versions, the question of rigour remains. Therefore, it is important to explain the process of generating theory about a study phenomenon if grounded theory methodology is to hold promise for developing theory in nursing.

In the literature surveyed, there has been an accumulation of material targeted at explaining what rigour means in qualitative research and at increasing researcher accountability for research practices during the course of qualitative inquiry (Morse *et al.* 2002). Over the last three decades, articulation of assumptions and procedures associated with qualitative methodologies has led to the identification of, and need for, standards of rigour consistent with qualitative research (Glaser & Strauss 1967, Sandelowski 1986, 1993, Morse 1991, 1999a, 1999b, Beck 1993, Hutchinson 2001, Sparkes 2001, Whitemore *et al.* 2001, Davies & Dodds 2002). Scholars have proposed and debated numerous standards of rigour of qualitative research (Glaser & Strauss 1967, Sandelowski 1986, 1993, Guba & Lincoln 1989, Beck 1993, Lincoln 1995). Glaser and Strauss (1967) specifically addressed standards of rigour as they relate to grounded theory in a chapter entitled 'The Credibility of Grounded Theory' (pp. 223–235).

Based on this accumulation of knowledge, scholars have progressed from exclusively 'emphasizing commonalities across qualitative methods...sometimes at the risk of ignoring differences' (Richards 1998, p. 324) to focussing their attention on the next phase of discourse. That is, they have begun to identify and recognize each qualitative research approach, such as grounded theory (Strauss & Corbin 1994, Miller & Frederick 1999, Cutcliffe 2000, Hall & Callery 2001), critical social theory, ethnography,

descriptive phenomenology and interpretive phenomenology/hermeneutics (Maggs-Rapport 2001), as having its own distinctive features. This need to acknowledge the distinctive features of each approach, coupled with problems of the unintentionally fragmented use of grounded theory methodology procedures in some grounded theory studies (Hentz Becker 1993), are reasons for explaining the inquiry process specific to grounded theory. Another reason is the unintentional tendency to confuse or slur qualitative research methods in grounded theory and phenomenology (Baker *et al.* 1992).

Aim

Consistent with the state of knowledge in the early 1990s, Beck (1993) proposed credibility, auditability and fittingness as three main standards of rigour that are common to qualitative methods in general rather than any specific research methodology. As a next step, the focus of our article is to discuss the practical application of grounded theory procedures as they relate to Beck's three concepts.

This article is not intended to be a review of grounded theory methodology in terms of its assumptions and procedures, as these have been thoroughly addressed elsewhere (Stern 1985, Hutchinson 1986, Strauss 1987, Strauss & Corbin 1990, 1994, 1998, Parse 2001). Therefore, we presuppose some familiarity with grounded theory methodology. Moreover, we do not intend to present the numerous standards of rigour proposed and debated by scholars such as Glaser and Strauss (1967), Sandelowski (1986, 1993), Guba and Lincoln (1989), Beck (1993) and Lincoln (1995), as these and other schemata for standards of rigour have recently been reviewed by Whitemore *et al.* (2001). Furthermore, we acknowledge that the evolution of terminology for qualitative inquiry has raised some concerns about the loss of a common language or terminology about rigour in science. We do not review the arguments for using (or for not using) terms from mainstream science, such as reliability and validity, as overarching concepts for ensuring rigour in qualitative research, as this issue is addressed by Morse *et al.* (2002) and Guba and Lincoln (1981, 1989).

The importance of this article can be understood by locating it within the body of work that addresses the practical application of standards of rigour in qualitative research practice (Rose & Webb 1998, Maggs-Rapport 2001, Whitemore *et al.* 2001, Davies & Dodds 2002). In an effort to contribute to the accumulation of this knowledge, our purpose is to discuss the practical application of grounded theory procedures as they relate to standards of rigour. In the first section of this paper, a grounded theory study is

described (Chiovitti 1997). Reflecting on examples from this study, we suggest eight methods of research practice that address credibility, auditability and fittingness. The eight methods of research practice may assist in enhancing rigour during the research process and critiquing grounded theory research reports, and should be of use to those engaged in nursing research, education, practice and management. This is an important step to creating an awareness and appreciation of the scientific merit of grounded theory research in research, education, and clinical arenas.

Description of a grounded theory study

We conducted a study in which psychiatric nurses were interviewed about what they saw as the meaning of caring for patients in hospitals (Chiovitti 1997). Based on nurses' accounts, the aim was to develop a grass-roots theory of caring within psychiatric nursing practice. The study was approved by the research ethics committees of the three participating urban, university affiliated hospitals, and of the University of Toronto. Consent was obtained and a copy of the signed consent form was given to each participant.

Study participants worked in acute care psychiatric units at three different urban teaching hospitals in Ontario, Canada. Psychiatric nurses, registered with the College of Nurses of Ontario, were recruited as participants. Data were collected through interviews. Two face-to-face taped interviews, using an interview guide, were conducted with each of the 17 study participants during their work shifts. Interviews lasted 60–90 minutes and were conducted at intervals convenient to the participant (i.e. usually 20–40 minutes).

The first interview with each participant was exploratory in nature and involved open-ended questions. At the start of the study, participants were asked general open-ended questions, in order to abide by the grounded theory methodology stance of limiting the influence on participants of previous theoretical constructs of caring (Strauss & Corbin 1990). Furthermore, in grounded theory methodology, it is the incoming information from participants that sharpens the focus of the research question and related general questions (Strauss & Corbin 1994). It is for this reason that the following research question and general questions were asked at the start of the study. The research question was 'What is the psychiatric nurse's meaning of his/her caring role with patients in hospitals on acute care general psychiatric units?' The three following general questions were also asked at the start of the study, in order to explore the research question with participants: (a) What do you do on a day-to-day basis in your caring with patients in this setting? (b) How do you

feel about what you do in caring on a day-to-day basis? and (c) Please describe an actual experience you have had with a patient in the setting that will help me to understand what caring with patients means to you. These general questions were effective in eliciting rich and dense descriptions of caring.

Moreover, in this study, the data collected were transcribed and analysed immediately after each interview. One reason for this practice is that in grounded theory methodology the incoming information from participants determines the information sought. This is referred to as theoretical sampling (Strauss & Corbin 1990).

In the study, theoretical saturation of data was achieved with 17 participants. A tentative preliminary model emerged from the first round of interviews with each of the 17 participants.

The second interview was used as an opportunity to affirm, modify, add, clarify and elaborate on what was said in the first interview. The questions added to the interview guide, which were based on the information introduced by participants during the first round of interviews, were effective in checking the content areas introduced and for verifying the emerging theory.

Information provided by participants earned its way into the theory when constant comparisons of data revealed the repeated presence of specific content areas in actual participant data. In grounded theory methodology, this is referred to as the constant comparison method of data analysis (Strauss & Corbin 1990, 1998).

In our study, the constant comparison method of data analysis was accomplished by constantly comparing new information with previously identified information (Carpenter Rinaldi 1995). This was to identify information that was repeatedly present, and relevant to participants. Two standard questions were used to examine the transcribed interview data: 'What is happening in the data?' and 'What action does each particular happening, incident, event or idea represent?' (Glaser 1978, Strauss & Corbin 1990). These two questions were asked to identify (1) categories, (2) relationships between and within categories, and (3) a central phenomenon or core category around which all the other categories revolved. Through the constant comparison of data, categories that needed further refinement and development were identified and developed (Strauss 1987). Each happening, incident, idea and event were given a name or conceptual label that represented what was happening in the data (Strauss 1987). Taped interviews were transcribed on the left-hand side of the transcript page. Then the categories identified were transcribed on the right-hand side of the transcript. A file folder, labelled according to the category

identified, was established and copies of the corresponding section of interview transcript were placed in the folder. As new data were compared with previous data, different levels of codes or labels, corresponding to different levels of the theory (i.e. concepts, categories, subcategories and basic social processes), were developed.

One of the purposes of this qualitative study was to specify, in context, the conditions under which caring exists and changes, and the actions associated with caring. Consequently, as conditions change, it is expected that the theoretical formulation presented will also change in order to reflect new conditions, different settings and diverse samples. Therefore, one of the limitations of the study is what cannot be found in the actual data at the time of the study (Strauss & Corbin 1994).

Methods for enhancing credibility in grounded theory methodology

According to Beck (1993), credibility is a term that relates to ‘how vivid and faithful the description of the phenomenon is’ (p. 264). In qualitative research, credibility is demonstrated when ‘informants, and also readers who have had the human experience...recognize the researcher’s described experiences as their own’ (p. 264). Credibility relates to the trustworthiness of the findings (Carpenter Rinaldi 1995). In the study described, credibility centred on whether ‘caring’ was accurately identified and described from the perspective of psychiatric nurses. Four methods of research practice for enhancing credibility are suggested. Each of these four methods of research practice is presented below and listed in the first section of Table 1.

Let participants guide the inquiry process

In order to ensure that the phenomenon investigated was accurately identified and delineated, participants in the study guided the inquiry process. An excerpt from the data (Chiovitti 1997) is provided in Box 1, as a practical example to illustrate how what the participant said guided the inquiry process. Box 1 shows the codes used to represent information introduced by one participant. These preliminary codes reflect the language used by this participant so that the product of analysis could remain close to the primary data.

As shown in Box 1, the participant introduced the concepts of ‘protecting’, ‘maintaining and ensuring safety’, ‘empowering’, and ‘giving the patient choices’ when describing caring (Chiovitti 1997). The codes shown were used to guide the inquiry process by adding them to the interview guide, as questions. For example, the code ‘empowering’ from Box 1 was added to the interview guide as follows: ‘What are the situations you encounter with patients in your day-to-day practice that will help me understand what you mean by empowering?’

Moreover, the research question was initially expressed as ‘What is the psychiatric nurse’s meaning of his/her caring role with patients in hospitals on acute care general psychiatric units?’ Initial interviews with the first three participants, each from a different hospital, revealed that caring was not described as a role. Rather, it was described as encompassing everything that nurses did in their work. This information guided the inquiry process and was retained as a result of its repeated presence in the data. Consequently, the research question about ‘caring role with patients’ was eliminated and the focus shifted to exploring ‘caring with patients’.

Standards of rigour	Suggested methods of research practice
Credibility	<ol style="list-style-type: none"> 1. Let participants guide the inquiry process 2. Check the theoretical construction generated against participants’ meanings of the phenomenon 3. Use participants’ actual words in the theory 4. Articulate the researcher’s personal views and insights about the phenomenon explored by means of <ol style="list-style-type: none"> (a) Postcomment interview sheets used as a tool (b) A personal journal (c) Monitoring how the literature was used
Auditability	<ol style="list-style-type: none"> 5. Specify the criteria built into the researcher’s thinking 6. Specify how and why participants in the study were selected
Fittingness	<ol style="list-style-type: none"> 7. Delineate the scope of the research in terms of the sample, setting, and the level of the theory generated 8. Describe how the literature relates to each category which emerged in the theory

Table 1 Eight methods of research practice for enhancing standards of rigour

Box 1 Tentative preliminary codes (in bold) derived from data

Participant data

I think there is a **protective** component to my caring in psychiatry but it is not the type that comes from countertransference or that I am rescuing them. It has to do with **maintaining the safety** of the person emotionally so they are comfortable and feel safe physically and emotionally (Chiovitti 1997, p. 99)...You are always ensuring safety in the hospital, but I think **empowering** starts right from the minute the patient walks in the door...even for somebody who has very little control, because they are psychotic. There are small ways you can empower them by **giving them choices**, or two choices. For example, if they are out of control you can give them a choice between taking medication liquid or injection, if that is appropriate for the patient. I think that is empowering them because it gives them a choice (Chiovitti 1997, p. 98)

Thus, modifying the interview guide, research question and content areas of the emerging theory according to incoming information from participants allowed them to guide the inquiry process, and helped to enhance credibility.

Check the generated theoretical construction against participants' meanings of the phenomenon

During the study, the theoretical construction generated was checked against participants' meanings of the phenomenon.

There were two levels of checking the theory constructed. First, as codes developed (based on incoming data from participants), questions on the interview guide were changed. Secondly, as the theory was constructed, codes were checked and verified, through direct questioning, for their relevance to participants' meanings. In this way, participants were invited to refine, develop and revise the emerging theoretical structure. For example, 'maintaining and ensuring patient safety' (Box 1) was consistently expressed in relationship to 'giving the patient choices' (Chiovitti 1997). This relationship between the two lower level, or open, codes of 'maintaining and ensuring patient safety' and 'giving the patient choices' was checked against participants' meanings in the data. These two lower level codes became one of the second level, or axial, codes representative of a relationship inherent in the process of caring (Chiovitti 1997). By examining all axial codes as a group, it was possible to identify the basic social process (i.e. an overarching or core category that encompassed all the categories in the theory).

A separate file on the information given by participants was maintained in order to check the generated theoretical construction against participants' meanings of the phenomenon. Each interview segment (such as the interview segments

in Box 1), and corresponding code leading to the analytic ideas, were photocopied and placed in a file. The emerging theoretical structure was documented by following Lofland and Lofland's (1984, pp. 133–137) directions on maintaining 'analytic files'.

The use of files was an effective practice for incorporating all participant meanings of caring, including those that, at any given moment of data analysis, did not fit with other data. The files were helpful in allowing the shift from one idea to another, based on the data from participants.

Use participants' actual words in the theory

In accordance with grounded theory methodology, using participants' own language at all levels of coding can further ground theory construction and add to the credibility of findings (Strauss & Corbin 1990). It is important to acknowledge the potential for distorting or inaccurately representing a participant's intended meaning of a word, relationship, or action, especially when using single words or segments of interview data for describing the phenomenon. In our study, this issue was addressed in two different ways. First, each word, relationship and action was supported with excerpts from interview data. Secondly, the varied meanings and contexts in which participants used a word were delineated. For example, the word 'empowering', introduced by the participant in Box 1, was found to have different meanings (Chiovitti 1997). Consequently, the word 'empowering' was delineated in terms of the different meanings it had to participants.

Articulate the researcher's personal views and insights regarding the phenomenon explored

Explaining the researcher's own constructions of the phenomenon and acknowledging how these affected the inquiry is important to enhancing credibility (Locke *et al.* 1993). In our study, three tools were used to limit the influence of pre-existing constructions on participants: (a) a postcomment interview sheet; (b) a personal journal; and (c) monitoring how the literature review was used.

Miles and Huberman (1984) recommend the use of a postcomment interview sheet as a self-monitoring tool. During the research process, the postcomment interview sheet was used to note aspects of the interview data that provided excitement or surprise. 'Investigator responsiveness' was maintained by remaining open and relinquishing ideas not supported by participant data, regardless of the potential and excitement they provided (Morse *et al.* 2002, p. 10). For example, surprise was noted on the postcomment interview

sheet when nurses described caring as encompassing everything that they did as opposed to viewing caring as a role. In this example, acknowledging the sense of surprise helped the researcher to realize early in the study how her personal constructions might affect the inquiry process.

The postcomment interview sheet was also used as a medium for what is termed 'memo writing' in grounded theory methodology (Strauss & Corbin 1990). Memo writing is used to keep track of insights and analytical ideas as they occur to a researcher during data collection and analysis (Hutchinson 1986). For example, 'maintaining and ensuring patient safety' (see Table 2) was expressed in relationship to 'giving the patient choices'. This relationship was documented on the postcomment interview sheet and put in a file along with interview data that led to the insight that they were related.

Hutchinson (1986) recommends that a researcher keep a personal journal of his or her own views of the phenomenon. In the study described, one entry in the researcher's personal journal about caring stated: 'I believe caring can be viewed as a role consisting of instrumental aspects and expressive aspects'. Based on this entry, the risk of selectively attending to 'caring as a role' is high. In this case, the personal journal allowed the researcher to recognize that the 'caring role' was found to have no theoretical relevance to participants. In this way, the researcher was theoretically sensitive to her views about caring as a role, and did not selectively look for views with which she agreed during data collection.

As there are variations in how a literature review is undertaken in qualitative research (Locke *et al.* 1993), it is important to discuss the purpose of the literature review in grounded theory methodology. Literature was reviewed before constructing the proposal, in order to provide a rationale for the potential contribution of the study, and to show that no identical inquiry had been conducted in the area of psychiatric-mental health nursing. As the purpose of the study was to develop a theory of caring, not to test a pre-existing theory, a review of literature on previous constructions of caring was not conducted until the theory was generated. This practice helped to limit the influence of previous theoretical constructions on the theory developed.

Methods for enhancing auditability in grounded theory methodology

Auditability refers to the ability of another researcher to follow the methods and conclusions of the original researcher (Carpenter Rinaldi 1995). Drawing on Guba and Lincoln's (1981) criterion of auditability, Beck (1993) describes it as reflecting the consistency of the research study. Auditability is demonstrated when another researcher is able to follow the

audit or decision trail of all the decisions made by a researcher at every stage of data analysis (Beck 1993). In the study described, two methods of research practice are encompassed within auditability, and are presented below as the fifth and sixth methods for enhancing rigour (shown in Table 1).

Specify the criteria built into the researcher's thinking

In using grounded theory methodology, it is necessary to delineate and specify the criteria used when approaching the transcribed interview data (Glaser 1978, Strauss 1987, Strauss & Corbin 1990). In our study, the criteria built into the researcher's thinking were specified by delineating standard questions consistently asked of the transcribed interview data during analysis. These questions were: (a) What is happening in the data? (b) What does the action in the data represent? (c) Is the conceptual label or code, part of the participant's vocabulary? (d) In what context is the code/action used? (e) Is the code related to another code? (f) Is the code encompassed by a broader code? and (g) Are there codes that reflect similar patterns? These questions were derived from Glaser (1978), Strauss (1987), and Strauss and Corbin (1990) and were asked in the identification, development, and refinement of all codes, including those previously discussed in Box 1.

In order to determine the relationship each code had to the overall theory, a consistent format of coding, referred to as the paradigm model, was used (Strauss & Corbin 1990). Relationships between different levels of codes were examined in terms of the different features of the theory in the paradigm model. Consequently, the paradigm model was used as a guide to asking the following standard questions of the data: What feature of the theory does the code denote in terms of the paradigm model? Is it representative of a context of caring, an antecedent condition of caring, an action/interaction of caring and/or a consequence of caring? This meant that each of the codes in Box 1 was considered in terms of the paradigm model. Hence, by delineating the questions asked of the data, researchers can audit their approach during the research process, while leaving an audit trail for another researcher to follow.

Specify how and why participants in the study were selected

In developing a theory using grounded theory methodology, Strauss and Corbin (1990) described the importance of explaining how and why study participants were selected. The number of participants recruited to the study is determined by the incoming information from previous partici-

pants (i.e. theoretical sampling). In our study, convenience sampling was initially used (Strauss 1987), because there were no data from participants to direct what further information should be sought and explored. This meant that any participant who came forward and met the eligibility criteria was interviewed (Chiovitti 1997). Participants were recruited until theoretical saturation of data was achieved. Saturation is the point at which data replicates and no new information emerges from the interviews (Morse *et al.* 2002). This was achieved with 17 participants (Chiovitti 1997).

Methods for enhancing fittingness in grounded theory methodology

Fittingness, also referred to as transferability, pertains to the probability that the research findings have meaning to others in similar situations (Carpenter Rinaldi 1995). Based on Guba and Lincoln's (1981) criterion of fittingness, Beck (1993) describes it as reflecting how applicable the 'working hypotheses or propositions generated from the research fit into a context other than the one from which they were generated' (p. 264). In our study, two methods of research practice are encompassed by fittingness and are presented below as the seventh and eighth methods for enhancing rigour (see Table 1).

Delineate the parameters of the research in terms of the sample, setting and level of theory generated

In the study described, the demographic characteristics of the sample included years of experience in nursing and psychiatric nursing, employment status, age, gender, educational preparation and cultural group. Some of the setting characteristics were the average length of hospitalization stay, the number of full- and part-time registered nurses, the psychiatric patient population, and the number of hospital beds on the unit. Moreover, the theoretical models and patient classification systems used for nursing care delivery were delineated. The nursing approaches used were also identified (i.e. primary nursing approach). This information is essential in helping the reader to visualize the context from which the theory and its specific categories were developed. Hence, providing details about the sample and setting characteristics is one way in which a researcher using grounded theory methodology allows readers to assess the fittingness or transferability of the findings.

In addition to describing the scope and context of the research in terms of sample and setting, delineating the level of theory generated allows readers to assess fittingness. Strauss and Corbin (1990) describe two different levels of

theory generated by grounded theory methodology: grand theory and substantive theory. The purpose of this study was not suited to the development of a formal or grand theory of caring in nursing. According to Strauss and Corbin (1990), grand theory evolves from exploring a phenomenon in a variety of contexts. In our study, this would have required the exploration of caring in a variety of contexts with nurses from a variety of clinical areas. Grand theories in nursing include, but are not limited to, Orem's General Theory of Nursing and Roy's Adaptation Model (Wesley 1995). Grand theories such as these, attempt to explain global views in nursing that have been useful in understanding key principles and concepts (Wesley 1995). In contrast, the theory generated in this study is a substantive theory, because the theory evolved 'from the study of [a] phenomenon situated in a particular situational context' (Strauss & Corbin 1990, p. 174). In our study, the particular situational context was psychiatric nursing in acute general psychiatric units in three hospitals, and the specific phenomenon of caring in psychiatric nursing was targeted. In conducting this grounded theory research, it was important to reflect on, and identify, the level of theory generated. Reporting the theory, without stating the level of theory generated, leaves the reader insufficiently informed about the scope of the theory and impedes the assessment of fittingness.

Describe the literature pertaining to each category which emerged in the theory

In demonstrating the probability that the research findings have meaning to others in similar situations (i.e. transferability), literature relating to each category in the theory was described. For example, it was discovered that caring involved interplay between 'maintaining and ensuring patient safety' and 'giving the patient choices' (Chiovitti 1997). In accordance with grounded theory methodology, the literature was searched for findings that referred to a similar phenomenon. For example, in literature that discussed ethics, it was noted that there was an interplay between duty to do good and respect for a person's choice and autonomy (Rumbold 1993), just as there was an interplay between 'maintaining and ensuring patient safety' and concerns about 'giving the patient choices' (Chiovitti 1997).

By highlighting similarities between the findings of our study and previous theoretical constructs in the literature, it is possible to show the potential transferability of the phenomenon explored to other situations in health care. However, this does not deny that the final judgement of the transferability of the findings ultimately rests with the reader.

What is already known about this topic

- Standards of rigour have been proposed that are common to qualitative methodologies in general.
- Several publications have addressed assumptions and procedures in grounded theory methodology.

What this paper adds

- We present standards of rigour that are specific to grounded theory research, with examples from an actual study.
- Eight methods of research practice that can enhance rigour in grounded theory methodology are described.

Conclusion

As qualitative methods are not uniformly agreed upon, and as there is more than one version of how researchers can go about implementing procedures in grounded theory methodology (Peshkin 1988, 1993, Solitis 1989, Cutcliffe 2000, Whittemore *et al.* 2001), researchers need to maintain a discourse on the practical methods of research practice used for enhancing standards of rigour. When researchers present and examine standards of rigour (credibility, auditability and fittingness), they create an important opportunity for those in nursing research, management, practice and education to envision and specify the boundaries of grounded theory methodology. Moreover, they create an awareness of and appreciation for the scientific merit and accountability of grounded theory research. This is vital to the possibility of using grounded theory methodology for developing nursing knowledge, as well as using grounded theory reports as the basis for, or as part of the body of work critiqued to inform, evidence-based practice in health care. We hope that the eight methods of research practice suggested in this paper will stimulate and promote dialogue that will assist in the continued delineation and review of standards of rigour relating to research practices in grounded theory methodology. In this way, researchers and consumers of grounded theory research can be empowered with information about rigour, and use this when proposing, conducting or reviewing grounded theory research.

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