Abstract
Grounded theory is a systematic research approach involving the discovery of theory through data collection and analysis. In particular, the focus is on uncovering patterns in social life that individuals might or might not be aware of. This article provides a practical overview of grounded theory to guide the research process in this area. The article is aimed at the nurse researcher who has some knowledge of grounded theory and/or is considering using this method of inquiry.

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Understanding grounded theory


Grounded theory is an inductive approach to research, in which hypotheses and theories are generated from the data collected. It is a means of systematically collecting and analysing the data to generate theory about patterns of human behaviour in social contexts. This qualitative methodology can be used to increase understanding of social phenomena (Clamp and Gough 1999). According to Glaser (2005) grounded theory is ‘an alternative to positivistic, social constructionist and interpretive qualitative data methods’. The premise of grounded theory is that empirical inquiry should explore social phenomena by looking at what people experience, what problems are present and how individuals go about resolving these issues. In other words, research is led and guided by the experiences of people in the inquiry and findings reflect patterns in these experiences. This is important when considering using grounded theory because the researcher should not predetermine a priori about what he or she will find, and what and how social phenomena should be viewed. Therefore, the value of grounded theory methodology is that it avoids making assumptions and instead adopts a more neutral view of human action in a social context (Simmons 2006).

To understand grounded theory, it is useful to consider the historical context in which it was developed. Grounded theory was a term first coined by Glaser and Strauss (1967). Glaser’s background was in positivism. Positivism assumes a philosophical position that human behaviour is determined by external stimuli, and that it is possible to use the methods of quantitative research to observe and measure social phenomena. Positivist research, therefore, focuses on the accumulation and analysis of facts as a means to develop explanations of phenomena. Strauss’s background was in symbolic interactionism, which is based on the symbolic meanings that people develop and on which they rely during social interaction. Symbolic interactionism frequently involves observation of face-to-face interactions.

Glaser and Strauss were critical of positivism and symbolic interactionism (Suddaby 2006). They noted that quantitative research was being used to confirm existing theory rather than to test or challenge it, and monographs based on qualitative data consisted of lengthy, detailed
descriptions and little generation of theory (Glaser and Strauss 1967). The purpose of grounded theory is, therefore, to enable robust generation of theory informed by the data, rather than using the data to test an existing theory. Its specific intention is to explore conceptually how people make sense of social phenomena and, importantly, how people work best to resolve their dilemmas.

Grounded theory provides a methodology to develop an understanding of social phenomena that is not pre-formed or pre-theoretically developed with existing theory and paradigms. This is why grounded theory is useful for researchers inquiring into phenomena where there is minimal previous research. The focus of grounded theory methodology is to inquire into what happens in a social context to uncover patterns in social life of which participants might or might not be aware. This makes data the focus of analysis, and specifically the patterns in the data that explain the phenomena in question. It is this central idea that theories can be generated from data alone that challenges the positivist research tradition.

Types of grounded theory

Alongside understanding the assumptions that underpin grounded theory methodology, the nurse researcher also needs to recognise the differences between the various types of grounded theory. Grounded theory was initially developed by Glaser and Strauss, and has since been adapted, for example, by Strauss and Corbin (1990), who introduced different terminology and a more complex coding procedure to make grounded theory more measurable. However, changes to the terminology and coding by Strauss and Corbin (1990) was considered by Glaser (1992) to alter the original premise of grounded theory, resulting in a different research methodology that forces data analysis to fit into the coding process, rather than allowing theory to be grounded in the data, which is the overall purpose of grounded theory. There is much discussion in the literature about the characteristics of a grounded theory study (Morse et al 2009), and the main differences between Glaser and Strauss’ (1967) original theory and Strauss and Corbin’s (1990) adapted version is shown in Table 1. Although there are differences between the two types of grounded theory, it is worth noting that grounded theory methodology is not meant to be used as a prescriptive framework that cannot be adapted. Instead, the original intentions were to keep discussion about grounded theory methodology open and to stimulate rather than halt thinking about inquiry in the social sciences (Glaser and Strauss 1967). This has led to adaptations of grounded theory, including Charmaz’s (2006) constructivist grounded theory, Clarke’s (2005) postmodern situational analysis, a realist or adaptive approach (Layder 1998), a phenomenological perspective (Richardson 2001), a hermeneutics approach (Rennie and Crosby 2002) and a feminist approach (Wuest and Merritt-Grey 2001).

Irrespective of the preferred type of grounded theory, it is important that the nurse researcher is clear about which type of grounded theory to use in relation to his or her research, and to understand the differences between the selected theory and the original theory, remaining true to the theory chosen. If this does not occur, there is a risk of confusion and dilution of the theory, which may affect the credibility of the research.

Grounded theory process

Grounded theory provides a research methodology that is not wholly predetermined by a particular research paradigm, and enables patterns in the data to emerge to explain the research question. To do this, the researcher can use any data collection method that best addresses the research question. The chosen research process must be the most relevant to inquire into the phenomena, rather than the research being led by the researchers preferred methodology, or type of discipline in which the research is being conducted. There are, however, few examples of how to conduct grounded theory in the literature (Morse et al 2009), and many research studies label their work as grounded theory, but do not follow the basics of the methodology (Dixon-Woods et al 2007). This may, in part, be because of the different ways of conducting grounded theory, which has contributed to a lack of understanding about its foundations as a research method. Examples in the literature also tend to focus on Strauss and Corbin’s grounded theory (Wasserman et al 2009).

The main components of a grounded theory study are shown in Table 2. To explore each of the components in depth is beyond the scope of this article, and the nurse researcher will need to spend time considering each area to develop a credible grounded theory study. It should also be noted that the components in Table 2 may appear in different combinations in other qualitative studies. However, any grounded theory study should contain all of these.

Openness

The nurse researcher needs to be open during the research process. In grounded theory, this means being sensitive to what is happening in the research area to allow issues of importance to the
participants to be exposed during data collection and analysis. This requires the nurse researcher to be sensitive to the ways in which he or she and the research process have shaped data collection and analysis. Central to this are previous assumptions and experience, which can influence inductive inquiries. Dey (2007) stated that the researcher’s background and experience informs how people respond to the data, and that research findings are a product of the data as well as what the researcher contributes to the analysis.

**Immediate analysis**
Immediate analysis refers to the initiation of analysis following coding and continuous comparison of the data. This is important because it enables the researcher to identify similarities and differences in the data, and informs further data collection. This is different from other methodologies where analysis commences only once all data has been collected.

**Coding and continuous comparison**
According to Charmaz (2006) ‘coding is the pivotal link between collecting data and developing an emergent theory to explain these data’. Coding occurs in three stages. First, open coding, an inductive approach, is used to generate as many ideas as possible from early data. Second, with continuous data collection and simultaneous analysis, coding becomes increasingly selective, or focused, in that the nurse researcher pursues a set of central reoccurring codes prevalent throughout the data set. This requires decisions about which of the open codes are most prevalent or important, and which contribute most to the analysis. Third, theoretical coding takes place, whereby the nurse researcher refines the final theoretical concepts.

Continuous comparison is a data analysis technique common to research designs. It is the simultaneous process of coding and analysis, allowing the data to be compared and contrasted.

**Memo writing**
During the process of coding and continuous comparison, memos are written to identify possible patterns in and between the codes. The function of memo writing in grounded theory is to organise thinking about how the data fits together and to help in the articulation of patterns and emerging links between codes (Glaser and Strauss 1967). Memo writing has four purposes: first, the ideas expressed raise the data to a conceptual level; second, memos encourage the sorting and reworking of ideas; third, a catalogue of memos is created which serves as a source for writing up theory; and fourth, memos are written to be easily organised.

### TABLE 1
Comparison of two schools of grounded theory

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Starts with a general idea of where to begin</td>
<td>Starts with a general idea of where to begin</td>
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<tr>
<td>Uses neutral questions</td>
<td>Uses structured questions</td>
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<tr>
<td>Development of conceptual theory</td>
<td>Conceptual description (description of situations)</td>
</tr>
<tr>
<td>Development of theoretical sensitivity (the ability to perceive variables and relationships) from immersion in data</td>
<td>Development of theoretical sensitivity from methods and tools</td>
</tr>
<tr>
<td>Theory is grounded in the data</td>
<td>Theory is interpreted by the observer</td>
</tr>
<tr>
<td>A basic social process should be identified</td>
<td>Basic social processes need not be identified</td>
</tr>
<tr>
<td>The researcher is passive, exhibiting disciplinary restraint</td>
<td>The researcher is active</td>
</tr>
<tr>
<td>Data reveals theory</td>
<td>Data is structured to reveal theory</td>
</tr>
<tr>
<td>Coding and continuous comparison of data enable patterns to emerge</td>
<td>Coding is defined by technique, leading to micro-analysis of data word by word</td>
</tr>
<tr>
<td>Uses two coding phases to develop concepts that explain the phenomena: simple (breaking data down into small segments and group into similarities that begin to describe patterns in the data) and substantive (open or selective choosing of a core category and relating other categories to it to explore emergent patterns)</td>
<td>Uses three types of coding: open (identifying, naming, categorising, describing phenomena), axial (the process of relating codes to each other) and selective (choosing a core category and relating other categories to it)</td>
</tr>
<tr>
<td>Regarded as the ‘true’ grounded theory</td>
<td>Regarded as a form of qualitative data analysis rather than grounded theory</td>
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</tbody>
</table>
Theoretical sampling

Theoretical sampling refers to further data collection guided by the findings from previous data analysis. It aims to collect systematically further data to explore emerging patterns. Importantly, at this stage, new data is used to confirm, add to or challenge the emerging patterns as well as identify gaps in the data analysis requiring further exploration.

Theoretical saturation

Theoretical saturation occurs when a dominant emerging pattern becomes saturated. This is then examined in relation to the literature (Glaser 2005).

**TABLE 2**

<table>
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<th>Main components of a grounded theory study</th>
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<tr>
<td>Component</td>
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</tr>
<tr>
<td>Openness</td>
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<tr>
<td>Immediate analysis</td>
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<tr>
<td>Coding and continuous comparison</td>
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<tr>
<td>Memo writing</td>
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<tr>
<td>Theoretical sampling</td>
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<tr>
<td>Theoretical saturation</td>
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<tr>
<td>Production of a substantive theory</td>
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</table>
Production of a substantive theory

Developing the emerging theory involves combining the sorted memos and emerging theoretical outline into a cohesive and accessible working theory. Examples from data are integrated and literature is used to support, illustrate and/or expand the theory. Grounded theory may be substantive or formal (Glaser and Strauss 1967). A substantive theory is grounded in the data. It identifies patterns across and within case studies focused on a similar theme; in other words it is for a specific area of inquiry such as patient care. A formal theory is for a conceptual area of inquiry such as socialisation. It usually emerges from substantive theory. Most grounded theory research generates substantive theory.

Role of grounded theory in nursing

Grounded theory can be used in nursing to explore complex social phenomena or that for which there is little or no theory (Glaser and Strauss 1967, Field and Morse 1994). It is increasingly being used in nursing research, providing a means of generating theory grounded in the realities of everyday clinical practice (Elliott and Lazenbatt 2005). Grounded theory aims to provide an understanding of human behaviour to deliver optimum care by exploring patients’ perspectives or experiences of living with a particular condition, for example.

As with all research methodologies, grounded theory can be difficult to use. Perhaps the main issue is that grounded theory does not fit neatly within the regular research process because it does not require the researcher to predetermine a research question or means of collecting data. Rather, the nurse researcher should begin the grounded theory research process with an inquisitive and open approach, enabling theories to emerge from the data. A lack of a predetermined research framework can be challenging and the nurse researcher may be unsure about what he or she is looking for. This may also pose a challenge when seeking research ethical approval, a process which requires a predeterined research purpose to be established from the outset. Nevertheless, there are certain ethical concerns that can be identified in advance and safeguarded against, such as consent and confidentiality.

Conclusion

Grounded theory relies on the collection and analysis of data to formulate theories and hypotheses. Therefore, the nurse researcher is not constrained by a specific research question. This, however, does not mean that the nurse researcher should not think about other research methodologies, rather that he or she should not be wholly defined by a particular methodology. For grounded theory research to be credible, the nurse researcher needs to understand the purpose and process of grounded theory to allow patterns to emerge. It is important that the nurse researcher understands that it is patterns in the data that provide information about social phenomena, rather than his or her interpretation of the data.

References


Simmons OE (2006) Some professional and personal notes on research methods, systems theory, and grounded action. World Futures.

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