

Methodological perspectives in the use of grounded theory in nursing and health research

Perspectivas metodológicas para o uso da teoria fundamentada nos dados na pesquisa em enfermagem e saúde

Perspectivas metodológicas para la utilización de la teoría fundamentada en datos en la investigación en enfermería y salud

Jose Luis Guedes dos Santos¹

Alacoque Lorenzini Erdmann¹

Francisca Georgina Macedo de Sousa²

Gabriela Marcelino de Melo Lanzoni¹

Ana Lúcia Schaefer Ferreira de Melo¹

Josete Luzia Leite³

1. Universidade Federal de Santa Catarina.
Florianópolis, SC, Brazil.

2. Universidade Federal do Maranhão.
São Luiz, MA, Brazil.

3. Universidade Federal do Rio de Janeiro.
Rio de Janeiro, RJ, Brazil.

ABSTRACT

The adoption of Grounded Theory (GT) in nursing and health research is growing. However, different structures and models are used, raising doubts among researchers. Thus, this theoretical study is presented in order to reflect on the different methodological perspectives of GT, highlighting historical, conceptual, structural and operational aspects. GT is based on theoretical and epistemological concepts with the possibility of sustained use in three methodological aspects: classical, Straussian and constructivist. Such strands have special features that enable different *modi operandi*, based on their own conceptions and epistemological paradigms, which are fruit of the evolution of the scientific knowledge construction process. To ensure rigor in the use of this method and the production of new knowledge, the definition of the methodological approach must be carried out according to the described phenomenon and the researcher's perspective on the reality and his epistemological position.

Keywords: Qualitative research; Nursing research; Nursing methodology research.

RESUMO

A adoção da Teoria Fundamentada nos Dados (TFD) na pesquisa em enfermagem e saúde é crescente. No entanto, observa-se a utilização de diferentes estruturas e modelos, o que gera dúvidas entre pesquisadores. Dessa forma, apresenta-se este estudo com o objetivo de refletir sobre as diferentes perspectivas metodológicas da TFD, destacando seus aspectos históricos, conceituais, estruturais e operativos. A TFD fundamenta-se por concepções teórico-epistemológicas com possibilidades de uso sustentado em três vertentes metodológicas: clássica, straussiana e construtivista. Tais vertentes apresentam especificidades que viabilizam *modi operandi* diferentes, baseados em concepções e paradigmas epistemológicos próprios, frutos da evolução do processo de construção do conhecimento científico. Para garantir o rigor na utilização do método e respectiva produção de novos conhecimentos, a definição da perspectiva metodológica deve ser realizada de acordo com a problemática descrita, o olhar do pesquisador sobre a realidade e sua postura epistemológica.

Palavras-chave: Pesquisa qualitativa; Pesquisa em enfermagem; Pesquisa metodológica em enfermagem.

RESUMEN

La adopción de la Teoría Fundamentada en Datos (TFD) en la investigación en enfermería y salud es creciente. Sin embargo, su uso no se produce de manera uniforme, lo que genera dudas entre los investigadores. Presentamos este estudio con el objetivo de reflexionar sobre las diferentes perspectivas metodológicas de la TFD, destacando sus aspectos históricos, conceptuales, estructurales y operativos. La TFD como un método de investigación se fundamenta en concepciones teóricas y epistemológicas con potencial de utilización sostenida en tres ejes metodológicos: Clásica, Straussiana y Constructivista. Estos filamentos tienen características que permiten diferentes *modi operandi*, basados en concepciones y paradigmas epistemológicos propios, frutos de la evolución del proceso de construcción del conocimiento científico. Para garantizar el rigor del método y respectiva producción de nuevos conocimientos, el enfoque metodológico debe ser definido de acuerdo con el fenómeno investigado y la postura epistemológica del investigador.

Palabras clave: Investigación cualitativa; Investigación en enfermería; Investigación metodológica en enfermería.

Corresponding author:

Jose Luis Guedes dos Santos.
E-mail: jose.santos@ufsc.br

Submitted on 09/02/2015.

Accepted on 21/10/2015.

DOI: 10.5935/1414-8145.20160056

INTRODUCTION

Why reflect on the use of GT?

The qualitative research studies phenomena inserted in natural contexts, trying to understand or interpret the meanings and perceptions that people construct about them. To capture the diversity of meanings that can be attributed to events or experiences, data are collected through direct contact with the participants who experience the problem under study. When analyzing the data, researchers use the dynamic process of inductive and deductive reasoning to establish themes/categories/concepts that are increasingly abstract, through skills involving sensitivity and creativity aimed at a complex and detailed understanding of the investigated object¹.

There is a diverse field of approaches, such as support for qualitative research, including the Grounded Theory (GT). It is an inductive-deductive method, that is, the construction of the theory requires the interaction between making inductions (going from specific to broad), producing concepts from data; and making deductions (ranging from broad to specific), generating hypotheses in terms of the relationships between the concepts derived from data, according to the interpretation^{1,2}. Thus, the focus of the GT is to understand the experiences and interactions of people inserted in a specific social context, to disclosing strategies developed before experienced situations^{1,3,4}.

Therefore the proposal of GT focuses on human action-interaction, making it a relevant methodological reference for the fields of nursing and health, whose practices are based on the constant interactions between patients, families and work staff^{1,3,4}. In nursing research, for example, GT contributes to optimizing the care provided to people and communities from the understanding of perspectives and life experiences on a specific disease or health condition^{4,5}. As a result, GT is one of most qualitative approaches used in nursing research in recent decades⁵⁻⁹.

However, it is observed that GT has been presented in research reports and Brazilian scientific productions heterogeneously both in formal structure and in the analytical processes used by the researchers. This condition can be justified because of the objections referred to in international publications by the creators of the method - Glaser and Strauss - and raises the following questions: In what ways are the authors opposed? How was GT restored from the split of Glaser and Strauss? What other authors have contributed to new strands or methodological perspectives of GT?

Some studies have already made efforts in seeking to elucidate these questions. In the scientific literature of the Brazilian nursing, studies argue, for example, conceptual and operational aspects of the method^{5,8,9}, as well as features and capabilities of the researcher in the development of GT⁵. However, there is still a need to carry out specific national studies, both to help understand the evolution of the method - as has been happening internationally - and to assist researchers interested in using it⁶.

Based on the above scenario and to contribute to the production of knowledge on GT, the aim of this study is to reflect on the different methodological perspectives of GT, highlighting its historical, conceptual, structural and operational aspects.

The text is didactically organized into two topics. First, it describes the evolutionary and historical journey of GT. As a result, there are the three main areas or methodological perspectives of the method and its central features are discussed.

GROUNDING THEORY: FROM EMERGENCY TO POLARITIES

GT was developed in the 1960s in the United States, by sociologists Barney G. Glaser and Anselm L. Strauss, as an alternative to hypothetical-deductive tradition of that time. Glaser has his academic origins at Columbia University, with extensive training in empirical methods and sociological theory, which also incorporated the social psychology to study the influence of the social system in individual behavior, according to quantitative methods. The academic background of Strauss, on the other hand, had origins at the University of Chicago, with its strong qualitative tradition and critical approaches in developing theories¹⁰.

From the junction of these two schools of thought, the GT method was developed by Glaser and Strauss in 1965 for studying the relationships between doctors and terminally ill patients. At that time, the medical staff rarely spoke about death or even recognized the dying process of critically ill patients. Thus, the research team observed how the process of dying in hospital settings occurred and the way in which terminal patients became aware of the fact that they were dying and how they dealt with that information. Glaser and Strauss gave their data an explicit analytical treatment and produced theoretical analysis of the social organization and the temporal arrangement of death^{3,4,10}. In this sense, the research proved to be innovative for its content, for its method and for the creative connections between them^{10,11}.

As they built their analysis in terms of the death process, they have developed systematic methodological strategies that could be adopted by social scientists to study other issues, which culminated in the publication of the book *The Discovery of Grounded Theory* in 1967. In this book, Glaser and Strauss articulated and presented their methodological strategies and advocated the development of theories from the research based on data instead of the deduction of analyzable hypotheses from existing theories. Such a method was called *Grounded Theory*, a continuous and systematic process of collection and analysis for generating and verifying results^{3,10}. The result of this process is a descriptive model, in which the necessary and sufficient conditions for the existence of a phenomenon or the role of phenomena in certain social processes are specified.

Thus, Glaser and Strauss challenged the positivist paradigm of their time, according to which the qualitative research was anecdotal, unsystematic and biased evidence. From their studies, they have shown that qualitative research could go beyond

descriptive studies and develop theoretical explanations in terms of human behavior^{10,12}. Thus, their main objective with the systematic approach of GT was to show that the results corresponded exactly to what it was asked to study participants^{10,11,13}.

In this context of early development of the method, it is important to clarify the relationship between GT and the symbolic interactionism. As Strauss had experience in conducting studies focusing on interaction processes, human behavior and social roles supported in the stream of symbolic interactionism, it is considered that GT has its origins in this theoretical perspective^{3,4,10}. However, the symbolic interactionism is not necessary to legitimize it as a scientific research method, which raises the question: what theoretical framework can be used to develop a GT?

The look at the interaction processes in GT can be anchored in reference that explores the articulation of relationships, interactions and associations among the subjects inserted in a dynamic and pluralistic social context. An example is the complex thinking and complexity theory^{2,8}, which enables inter-subjective interpretation from the multiple relationships of phenomena that are interconnected and complement each other.

Despite the success achieved, Glaser and Strauss began to diverge in terms of the methodological procedures of GT after a while. While Glaser remained faithful to the principles of GT based on the objective empiricism for the conduct of its investigations, Strauss moved the methods for verifying and incorporated new analytical tools, such as interpretative description of the data^{3,11,14,15}. Thus, the rupture occurred between the authors and the two went different paths.

The new theoretical positioning of Strauss regarding the method culminates with the publication of *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, written in partnership with Juliet Corbin. Strauss and Corbin work focuses on the application of GT, featuring tools for researchers to use it as a scientific method. They added the idea that the generation of theory occurs from a collaborative relationship between researchers and study participants, creating the foundation for a constructivism perspective of the method. Note that the main driver of these changes was Corbin because Strauss died in 1996, before finalizing the second version of his book^{10,12,13}.

Glaser, in turn, continued defending the GT method in its primary approach, without considering other analytical procedures. For the author, GT follows the maxim that reality passes, but ideas remain. In this sense, findings are soon forgotten, but not ideas. Therefore, one should focus on the production of ideas, concepts and theoretical models. Thus the transcendental character of GT is revealed in transposing data to the abstract level, raising the level of abstraction for the inclusion and integration of previous descriptions or preexisting theories. It is precisely the interaction between nouns and theoretical codes featuring GT as a method of analytical inductive search. The theoretical coding determines the unique character of the theory when it establishes new connections and turns them into relevant ideas¹⁵.

Therefore, the main difference between the views of Strauss and Glaser of the method is the flexibility of the

first and second pragmatism. Strauss understood GT as an analytical model for supporting researchers consisting of a set of recommendations. However, the creativity of the researcher allows you to use other means and technologies to conduct the investigation. In this context of discussion in terms of the constructive character of the method, from the 2000s, an author stands out: Kathy Charmaz.

Charmaz argues that GT “combines two opposing traditions and competitors”⁴. On one hand, there was the positivism of Columbia University, represented by Glaser and its quantitative training that resulted in rigorous methods of analysis. On the other, the influence of the Chicago School in the person of Strauss, as it valued the subjective social meanings that emerge from human action, revealing the pragmatic philosophical tradition. This approach suggests that researchers focus their gaze to the “what” and “how”, as it points out that researches always take place in different contexts comprising multiple social, historical and political aspect¹.

However, Glaser and Strauss were concerned to make clear that the theory must emerge from the data by social research, which means adopting a strategic process to produce and analyze information and therefore achieve concepts that are used to describe and explain them. In this light, they indicate that GT emerges from the systematically grouped and analyzed data in a research process, meaning that the formulation of the theory is something indispensable for the in-depth knowledge of the social phenomena^{14,15}.

Charmaz defends the Constructivist Grounded Theory and introduces a new perspective, especially with regard to analytical procedures^{1,3}. The author considers the theoretical and methodological advances to provide a way to make GT through the support of flexible guidelines and confronts Glaser and Strauss when she says that neither the data nor theories are discovered, both are built “through our involvement and our interactions with people, perspectives and research practices, both past and present”⁴. She argues that her approach provides “an interpretive picture of the world studied, not an accurate picture of it”⁴; therefore, the meanings and expressions of the research participants are constructions of reality.

To illustrate the main works that mark the development of GT, we present Figure 1.

MAIN FEATURES OF THE DIFFERENT METHODOLOGICAL ASPECTS OR PERSPECTIVES OF THE GT

From the polarities that have arisen along the evolutionary path of the GT method, three main areas or methodological perspectives were outlined: classic (also called Glaserian); Strauss (also known as relativist or subjectivist); and constructivist^{3,4,12,13}. Chart 1 shows the main characteristics of these three currents.

Below, we present some specifics of the main points made in the context of Chart 1, according to each of the methodological aspects of GT.

CONTEXTUALIZATION OF THE RESEARCH PROBLEM

The research question, in general, is defined by the context of the study of issues supported by evidence or gaps in terms of the knowledge related to the focused reality, namely how relational and interactive processes take place in the experiences of the subjects included in this context of interactions or movements of exchanges. However, because each component of GT results from a different epistemological paradigm, the development of the research question can be varied depending on the perspective taken.

In addition, during the process of research, other issues may emerge dynamically from data collection. This occurs as the hypotheses are built and reveal new possibilities for the research problem and questions that will guide the interview^{1,11,15}.

Following this line of thought, it is necessary to address a controversial issue present in the process of building a GT. It is the influence of ideas/concepts/paradigms pre-established and described in the literature on collection procedures and data analysis. The idea of the DFT does not require the execution of a preliminary review of the literature for conducting the study is present between the classical assumptions of the present method.

Researchers' search for neutrality is controversial for their performance in the process of collecting and analyzing data in qualitative research. Apart from a numerical approach of a particular object of study, a commitment to scientific rigor and impartiality of the study results takes place through the detailed search for qualifying elements in their various dimensions. Thus, in the contemporary perspectives of GT, the literature review is a feature that guides researchers on the subject of the investigated design in the description of the study problem and delimitation of the object under investigation. Therefore, it can be performed at study entry to contextualize the problem in research and also

throughout the research process, to fill the theoretical needs that emerge throughout data analysis. The literature also assists in the development of hypotheses, delimiting properties of categories and the definition of the theoretical codes.

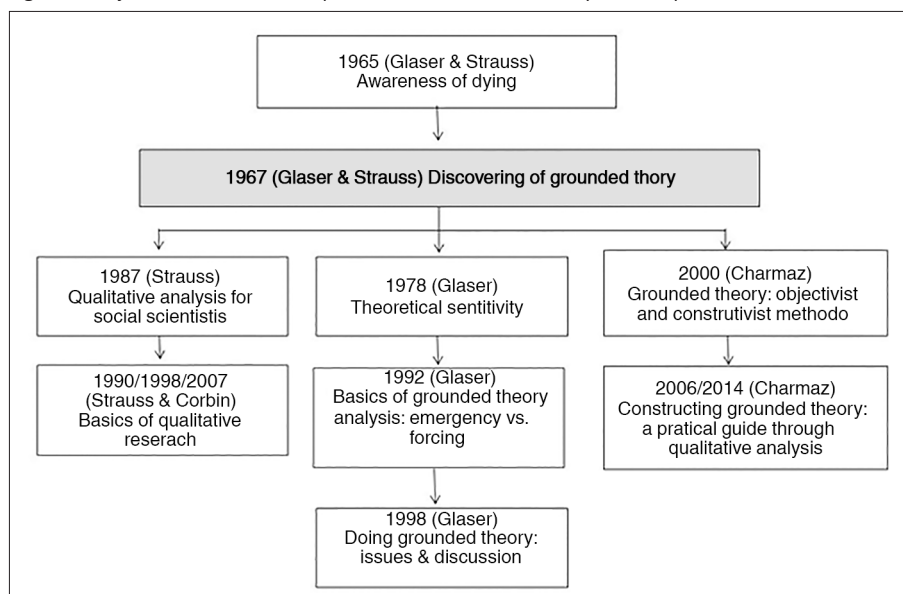
Thus, in the context of the study of problems we can see the gaps of knowledge in both the conceptual and in the procedural dimensions the way the relationships, interactions and social associations happen and that new understandings signal from their meanings that the subjects who go through the studied experiences are able to explain them. The consultation to literature can be useful in the search for answers to questions such as: what phenomenon is present in this context? What is already known about it? How to move forward? What meaning does it have for those who experience it? Is it a movement that possesses a course in time? What is the intensity of significance or importance?

It is also noted that the focus of GT is the search for meaning on such movements, not for existential meanings for the person or his experience or the meanings over an image a person projects or that represents for her. Therefore, it is distinguished from a phenomenological study or social representations, or from others which seek to understand the essence of the phenomenon or condition.

DATA COLECTION

The interview is the main technique used in GT. However, according to the study problem, other data collection techniques can be used such as observation, group interviews, focus groups, document review and pictures/photos or graphical expressions. The collection of data through multiple sources is particularly encouraged by the constructivist perspective of GT as a strategy to reconstruct the experience of the subjects in a more reliable way^{4,10}.

Figure 1. Major works on the development of the Grounded Theory. Florianópolis, 2014.



Source: Adapted from Bandeira-de-Melo and Cunha¹⁵

Chart 1. Main characteristics of these three currents aspects. Florianópolis, 2014

	Classical	Straussian	Constructivist
Epistemological paradigm	Positivism	Post-positivism	Constructivism
Research problem identification	<ul style="list-style-type: none"> • Emergent • No need for deepening in the literature initial review 	<ul style="list-style-type: none"> • Experience • Pragmatism • Literature 	<ul style="list-style-type: none"> • Sensitization of the concepts • Specific to each discipline
Investigation and theory development	Emphasis on the emergence of data through the induction process and the researcher's creativity	Paradigmatic checking model	Co-construction and reconstruction of data toward the theory
Relationship with participants	Independent	Active	Co-construction
Data collection	Emphasis on observation and interview	Emphasis on observation, interviews and analysis of documents, films and videos	Emphasis on intensive interviews. It encourages the use of multiple sources
Data Analysis/Coding	<ul style="list-style-type: none"> • Open coding • Selective coding • Theoretical coding 	<ul style="list-style-type: none"> • Open coding • Axial coding • Selective coding 	<ul style="list-style-type: none"> • Initial coding • Focused coding
Diagrams and memo	Intensification in the use of memos	Valuation of diagrams and memos	Flexible
Theory evaluation	<ul style="list-style-type: none"> • Applicability • Operability • Relevance • Changeability 	<ul style="list-style-type: none"> • Adjustment • Understanding • Theoretical generalization • Control 	<ul style="list-style-type: none"> • Congruence and consistency of the theory in relation to the context • Reflective Interpretation of the researcher

Source: Adapted from Hunter et al.¹³

In this sense, Charmaz warns that the focus of the interview, as well as research questions, will change as researchers choose an objective and constructive approach. For the former, the emphasis is on the assumptions and meanings attributed by participants to the phenomenon under study. In the second, the researcher seeks information on chronology, environment and behavior. So the constructivist GT prioritizes the use of open and in-depth interviews, also called intensive interviews⁴.

ENCODING AND ANALYSIS PROCESS

Building a GT requires the researcher's creativity, curiosity, critical thinking and theoretical sensitivity in the process of coding and analyzing data⁵. To achieve these skills, each strand of the method proposes specific strategies.

Glaser and Strauss did not explain the difference between category and concept in their studies. Yet Strauss and Corbin asserted that concept is an "abstract representation of a fact, of an object or an action/interaction that a researcher identifies as important in the data"¹⁴. The category, in turn, is a grouping of concepts "of great analytical power as it has the potential to explain and to predict"; therefore, it has a high level of abstraction. This means that, in the review process, the researcher first identifies the concepts that, grouped, will give rise to the categories, thus reaffirming that these "are concepts derived from data"¹⁴. The researcher's effort in this analysis phase aims to define the

attributes that are designated by Strauss and Corbin as properties, in order to detail the content of the categories, namely, the concepts advance and are consolidated in terms of properties and dimensions.

Strauss and Corbin present a structured and systematic approach to data analysis in three stages. Open coding, as the first step of the review process, is characterized by the micro-analysis process, valuing incidents and codes in vivo to prevent the analysis from being restricted to data reduction. The second stage is the axial coding, which aims to specify the properties and dimensions of a category and consists of a process of reunification of the data "to generate more accurate and complete explanations of the phenomena"¹⁴. The authors justify this process so that researchers study both the structure and the development of the phenomenon process.

The conceptual reunification where structure and process appear is called paradigm and it has basic components: conditions (it explains why and how people respond to the phenomenon), which can be causal (facts that influence the phenomenon or factors that have caused the phenomenon), intervening or intervenors (they influence strategies or alter the impact of causal conditions), and contextual (which creates circumstances to which people respond through actions and interactions); and consequences (resulting from the use of strategies, allowing for more thorough explanations). Thus, the purpose of axial coding is "to systematically develop categories and define their relation"¹⁴.

The last step is the selective coding, which aims to integrate and refine categories into an analytical model, which consists of the central category definition to then describe the concepts in terms of properties and dimensions in search for internal consistency¹⁴. Therefore, in the Straussian approach, the researcher presents a paradigm (visual model) that identifies central phenomenon, context, intervening conditions, it explores causal conditions, specific strategies and outlines consequences.

Glaser advocates the realization of the theoretical coding and eliminates the need of axial coding, since it connects the fragmented elements again¹⁵. Thus, in the analysis procedure, the theoretical codes differ from nouns both in abstraction level and in type because they are located in a more abstract conceptual level that does not refer to integration models. The integrative function of the theoretical codes is essential to generate a theory that has meaning, for without them the subtlety of the interaction between categories is lost. They should be selected by the researchers as they emerge from the data and are considered relevant and useful for the integration of categories and subcategories, and consequently for the preparation of the theory¹⁵.

In the constructivist perspective, Charmaz encourages researchers to theorize in terms of the interpretative dimension that “deepens the meanings and implicit processes and is, thus, more evident”⁴. However, it points out that, in practice, the boundaries between positivist and interpretive dimensions may not be as clear and that the condition of theorizing is itself eclectic. That is, researchers are free to use the way that best fits their goals, because the “balance between theoretical propositions [...] and the number and density of abstractions depends on the target audience of the researchers who use grounded theory, of their purposes, as well as their theoretical inclinations”⁴.

Charmaz recommends that the encoding process for data analysis is carried out in at least two stages: initial and focused coding. In the initial coding, researchers carefully study their data and conceptualize their ideas through codes that can be set up word by word, line by line or incident by incident. Focused coding, in turn, allows researchers to separate, classify, synthesize, integrate and organize large amounts of data, based on the most significant and/or frequent code, aimed at conceptualizing the empirical material. To perform the analysis process, two criteria should be considered: the setting (it verifies if the theory fits the experiences of the participants) and relevance (to assess whether the theory is relevant as analytical framework that interprets the relationships between processes)^{3,4}.

The word-by-word and line-by-line encodings help researchers to see what is known under a new perspective, as the coding per incidents aids the discovery of patterns and contrasts from the identification of properties and dimensions of the phenomenon. The codes “in vivo” are specific terms or are widely used by participants⁴ and they work as markers of the speech and of the meanings of these subjects. Such codes allow researchers to develop a deeper understanding of the analyzed event.

Given the differences between the coding steps of each methodological perspective of GT, the detailed record in research reports on how to use the method in line with its guiding theoretical and philosophical references is critical. In this sense, it is necessary to point out that the isolated use of the coding steps of GT for data analysis in qualitative research does not legitimize the description of a study as GT.

One of the requirements for the development of GT analytical process is the theoretical sensitivity. The ability of researchers allows them to recognize differences and variations in the data, in conceptual terms, in the encoding process and in the interpretation of meanings. Such ability is based on the knowledge gained from the scientific literature, professional and personal experience, and especially the experience of the researcher in the analytical process of GT^{3,5,14}. Therefore, GT is considered, at the same time, art and science. It is art for the researcher’s ability to appoint categories, ask questions, make comparisons, and group raw data into integrated and innovative schemes. It is science for the scientific and methodological rigor that should be kept in the data analysis^{14,15}.

To develop theoretical sensitivity and achieve a balance between science and creativity, the classic¹⁵ and constructivist chains⁴ guide the use of gerunds in the encoding process as a strategy to help you detect processes and set up the data, since they transmit a “strong sense of action and sequence”⁴. The adoption of this verb tense provides greater dynamism to the concepts and makes it easier to understand them in terms of action/interaction.

To conclude this topic, it is worth mentioning the use of technological resources in the process of analyzing the GT data, such as software for analyzing qualitative data. Such software can help researchers to organize the information and store it in folders in a convenient way for easy access to raw speech excerpts, images and related codes. In addition, it can generate an image of the codes, themes, and their interrelationships through diagrams, which favors the comparison process of the data and the design of the different level of abstraction of the qualitative data³. The use of these technological resources is not a requisite for success in developing a GT. However, researchers can be an important integration tool in a large research, which the database sharing is provided for.

CHARTS AND MEMORANDA USE

Diagrams are visual aids that promote the integration of the different stages of research and aim to clarify the connections between the elements of the emerging theory. On the other hand, the memos are records that contain analysis of products and aim at the development of concepts. Both are configured as analytical strategies considered analysis records - which may be done manually or by means of software for qualitative data analysis¹⁴.

Specifically in the dimension data collection, the three methodological perspectives of GT suggest the use of diagrams

and memos as a strategy to guide researchers throughout the research. The diagrams and concept maps help to visually display the categories and their connections throughout the research process⁴. In addition, when using the diagrams as data analysis feature, researchers exercise the establishment of conceptual relations, which facilitates the construction of hypotheses and concepts.

VALIDATION OF THE THEORY, OF THE TYPE OR THEORETICAL MATRIX

The objective of GT is to generate a unified theory or theoretical explanation for a process, an action or interaction shaped by a vision of a large number of participants expressed on the data collected^{1,11,14}. Thus, the validation step consists in presenting the theory - or theoretical model or theoretical framework - built with the categories and their relations to reach the phenomenon or category that is central to expert professionals in terms of the method or in terms of the subject under study and/or group or part of the group of research participants¹⁴.

It is worth to point out that the result of GT is a substantive level of theory, that is, which is written by a researcher who is close to a specific problem or population of people¹. On the other hand, a formal theory has the exploratory ability to apply its concepts to the same phenomenon, which is developed in contexts and situations. Thus, GT is a theoretical explanation for a problem in a distinct enclosed area, namely, a particular study^{3,4}.

Among the three strands of GT is the Straussian current which provides greater importance to the theory validation stage, considering it as a fundamental criterion for printing scientific rigor and the consolidation of the results of the survey¹⁴. The increased emphasis of Strauss regarding the validation of the theory may be related to its systematic proposal for the analysis and organization of data on the components of the paradigmatic model.

In this sense, there are four central criteria for judging the applicability of the theory to the phenomenon studied:

1. Adjust: If the theory is true to life it should fit the studied substantive area;
2. Understanding: the theory must be understandable and meaningful to both the people studied and the students of the focus area;
3. Theoretical generalization: if the study is based on understandable data and extensive conceptual interpretation, the theory must be sufficiently abstract and include enough variation to make it applicable to other contexts related to that phenomenon;
4. Control: the theory should provide control since the hypotheses proposing relationships between concepts can be used to guide further action¹⁴.

Regarding the validation step, Glaser argues the modification capacity of the theory as new data arise¹⁵. With respect to

the adaptation of the theory, it is important to constantly readjust the data categories throughout the development of the research. Highlight the fact that pre-existing categories can adapt to the data; however, researcher's role is to develop "emerging adaptation" between the pre-existing data and categories, ensuring that they remain functional. The conceptual level transcends the data, going beyond them both in relation to its use and the temporality.

Thus, the validation aims at proving that the theoretical model is representative of the investigated reality. It also allows the discussion of its applicability to other contexts of time and space; it admits modifications and additions of new elements aimed at the improvement of knowledge in terms of the phenomenon investigated.

BY WAY OF THE CONCLUDING REMARKS

Envisioning new possibilities

This study sought to reflect and highlight historical, conceptual, structural and operational aspects of the three main methodological perspectives of GT that can be used in nursing and health research: classical (also called Glaserian); Straussian (named relativist or subjectivist); and constructivist. Each of these theoretical and epistemological concepts features specificities that enable different *modi operandi*, based on their own conceptions and epistemological paradigms that are fruits from the evolution of scientific knowledge construction process.

It is agreed upon among the method experts that theory emerges slowly through a rigorous process of formulating and integrating concepts from a logical, systematic and explanatory scheme, which reveals deep understanding of social phenomena. In this sense, the construction of a GT requires theoretical knowledge of its main constituent elements, as well as time and dedication of the researcher.

Knowledge, reflections and the progressive mastery of the method advance, especially for the increased use of GT in the investigations. Thus, it is natural that new construction and contributions are presented in this path. The GT procedures of Strauss and Corbin are presented in a systematic and structured way, facilitating learning and use of the method, especially for beginning researchers. However, to ensure accuracy in this use and corresponding production of new knowledge, the definition of the methodological approach should be carried out according to the problem under study, the researcher's perspective on reality and its epistemological stance.

The researcher's method domain is an apprenticeship that occurs while searching, reflecting and deciding on the many opportunities or paths to follow, moving between the certainties and uncertainties of choosing the most appropriate option. Each user experience of GT is always a new learning! Thus, there is a need for further studies to identify and analyze how the GT has been used in nursing research and health in order to contribute to the continued development of the method.

REFERENCES

1. Creswell JW. *Investigação Qualitativa e Projeto de Pesquisa: escolhendo entre cinco abordagens*. 3ª ed. Porto Alegre (RS): Penso; 2014.
2. Backes MTS, Erdmann AL, Buscher A, Backes DS. Desenvolvimento e validação de teoria fundamentada em dados sobre o ambiente de unidade de terapia intensiva. *Esc. Anna Nery*. 2011 Out./Dez.;15(4):769-75.
3. Engward H. Understanding grounded theory. *Nurs Stand*. 2013 Oct.;28(7):37-41.
4. Charmaz, K. *A construção da teoria fundamentada: guia prático para análise qualitativa*. Porto Alegre (RS): Artmed; 2009. 272p.
5. Leite JL, Silva LJ, Oliveira RMP, Stipp MAC. Reflexões sobre o pesquisador nas trilhas da Teoria Fundamentada nos Dados. *Rev. Esc. Enferm. USP*. 2012 Jun.;(3):772-7.
6. Higginbottom G, Lauridsen EI. The roots and development of constructivist grounded theory. *Nurs Res*. 2014 May;21(5):8-13.
7. Rintala TM, Paavilainen E, Åstedt-Kurki P. Challenges in combining different data sets during analysis when using grounded theory. *Nurs Res*. 2014 May;21(5):14-8.
8. Gomes IM, Hermann AP, Wolff LDG, Peres AM, Lacerda, MR. Teoria fundamentada nos dados na enfermagem: revisão integrativa. *Revista de Enfermagem UFPE on line*. 2015;9(supl.1):466-74.
9. Silva MM, Moreira MC, Leite JL, Stipp MAC. A Teoria Fundamentada nos Dados nos estudos de Pós-Graduação Stricto Sensu da Enfermagem brasileira. *Rev. Eletr. Enf*. 2011 Out./Dez.; 13(4):671-9.
10. Mello RB, Cunha CJCA. Grounded theory. In.: Godoi CK, Mello RB, Silva AB, organizador. *Pesquisa qualitativa em estudos organizacionais: paradigmas, estratégias e métodos*. 2ª ed. São Paulo: Saraiva; 2010. p. 241-66.
11. Tarozzi, M. *O que é grounded theory? Metodologia de pesquisa e de teoria fundamentada nos dados*. Petrópolis (RJ): Vozes; 2011.
12. Hall H, Griffiths D, McKenna L. From Darwin to constructivism: the evolution of grounded theory. *Nurs Res*. 2013 Jan.;20(3):17-21.
13. Hunter A, Murphy K, Grealish A et al. Navigating the grounded theory terrain. Part 1. *Nurs Res*. 2011;18 (4):6-10.
14. Strauss A, Corbin J. *Pesquisa qualitativa: técnicas e procedimentos para o desenvolvimento de teoria fundamentada*. 2ª ed. Porto Alegre (RS): Artmed; 2008.
15. Glaser BG. *The grounded theory perspective: conceptualization contrasted with description*. Mill Valley, CA (EUA): Sociology Press; 2011.