

# Parents' appraisal of children's pain: a grounded theory; Mayo Clinic/Ospedale Pediatrico Bambino Gesù joint nursing research project

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## Abstract

To achieve a greater accuracy of paediatric pain assessment and efficacy of its management, it is important to include parents in the process of appraisal, as promoted by the family-centred model of care. Other studies have highlighted parental stress and anxiety over their children's health, and the accuracy of their assessments seems variable. However, the factors that contribute to parents' appraisals are uncertain. Their values, beliefs, cultural upbringing/influences and other cognitive factors probably have an impact on this process, but how and to what extent is not known. This paper is an overview of the Joint Mayo Clinic/Ospedale Pediatrico Bambino Gesù research project on parents' appraisal of children's pain and of the methodology used, i.e. grounded theory. The objective of the study is to understand the appraisal process of parents when considering their child's or infant's pain behaviours in the health context and to examine cultural influences on this process.

**Keywords** child; grounded theory; neonatal; parent; pain

In 2007, during the 4th Joint Nursing Conference held at the Mayo Clinic in Rochester, Minnesota, USA the nursing leadership from our hospital asked our American colleagues if they were willing to develop a joint nursing research project. At the end of the conference, we had a meeting that took the form of a brainstorming session about possible research topics, such as parents' management of children's fever, the reasons for non-urgent paediatric accesses to the Emergency Department, family perception of inpatient health education, the exchange of patient information among healthcarers, and pain.

Shortly after our return from the USA, we started analysing the different options that had emerged in terms of interest, feasibility and resources. A bibliographic search led us to a topic

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within the broad theme of 'paediatric pain assessment and management' that had not previously been studied: the process of parents' appraisal of children's pain.

The present project has been developed by Sonja Meiers, PhD, Nursing Professor at the University of Minnesota in Mankato, USA, who agreed to guide us through this experience with the objective of sharing our desire to contribute to nursing knowledge and to improve our competence in nursing research practice through a Mayo Clinic/Ospedale Pediatrico Bambino Gesù (OPBG) joint research project.

## Why parent appraisal of children's pain?

Pain assessment and management has been the subject of many studies. Several of these have identified the importance of including parents in the process of appraisal and management of their child's pain to achieve greater accuracy and efficacy, as promoted by the family-centred model of care.

Other studies have highlighted parental stress and anxiety over their children's health, and the accuracy of their assessments seems variable. However, the factors that contribute to parent's appraisals are uncertain. Their values, beliefs, cultural upbringing/influences and other cognitive factors probably have an impact on this process, but how and to what extent is not known.

This paper will focus on the main features of the study design and its qualitative methodology – grounded theory – which is particularly suited to a subject hardly ever studied before.

## Study objectives

The purposes of this study were to understand the appraisal processes of parents when considering the pain behaviours of their child or infant in the health context, and to examine cultural influences on this process. It is important to gain a deeper knowledge about parents' appraisal process, particularly in contexts where family-centred care is applied, since it can help nurses to educate and involve parents in their child's pain management.

The research questions to be answered through this study are 'What are the parental appraisal processes when considering child or infant pain behaviours in paediatric and neonatal clinical settings?' and 'What is the influence of culture upon parent appraisal when considering their child's or infant's pain behaviours?' The initial research questions are quite broad and allow a flexible exploration of a phenomenon that has hardly ever been studied before.

The conceptual model guiding this study is a combination of family-centred care and a symbolic interactionist perspective. Family-centred care is based on concepts such as patient dignity, respect, information-sharing, participation and collaboration. Symbolic interactionist perspective is a theory of self, society and interaction which maintains that people construct meanings in the process of interaction.

## Methods

The grounded theory method, adopted for this study, was conceived by Glaser and Strauss with the objective of developing new theories grounded on data. Grounded theory goes back to

symbolic interactionism and to the pragmatic philosophy of Dewey and Mead.

According to Blumer, people interacting with each other do not respond to actions but to the meanings they create for them. It is exactly those meanings, and the processes of action–interaction–emotion in which we are interested in this research project. Pragmatism is interested in action per se. According to Dewey, knowledge is possible through the actions and interactions of people who, through their behaviour, reveal themselves.

### Origin of grounded theory

In 1967, Glaser and Strauss published *The discovery of grounded theory*,<sup>4</sup> in which, for the first time, they explained their research strategy defending the development of theories based on data rather than deducing hypotheses from existing theories. They criticised the social researcher's trend at that time of concentrating on the description of social facts rather than discovering new theories.

In that period, quantitative research was far more popular than qualitative research in the social studies. In fact, the scientific methods used then, based on systematic observation, reproducible experiments and the formulation of logically deduced hypotheses, seemed to be more generally accredited for the purpose of knowledge development. Qualitative research was considered impressionistic, anecdotal and full of bias. Interviews and observations were used mainly to refine instruments for quantitative measurement such as questionnaires.

The more accredited positivist paradigm, on the contrary, put value on objectivity, generality, reproducibility and oneness of truth, which resulted in a competition between different hypotheses and theories. With this method, human experience and behaviour were reduced to measurable and quantifiable variables. The researcher had the role of a passive, objective observer who could not be involved in the collected data, and the world studied was considered a separate entity. He or she had to pursue a knowledge that could be measured and verified through valid instruments and a research design that could be reproduced. The objective was to verify hypotheses deduced from existing theories rather than creating new ones.

Glaser and Strauss proposed a new strategy for qualitative research with the purpose of creating new theories to explain the social world.

### Grounded theory: assumptions and researcher's role

Qualitative research and grounded theory in particular rely on different assumptions about reality and truth: that there is not only one objective reality to discover. Every human being has a personal experience and assigns a different significance to objective events. What is important for the researcher is not the event itself, because every person gives meaning to events according to his or her own personal history, experiences, gender, time, place, culture, politics, religious beliefs and professional education.

According to the constructivist approach, concepts and theories are developed by the researcher based on stories told by the participants in order to give meaning to their own experience, to explain it to themselves and to the researcher.<sup>2</sup>

The researcher is fully involved in the contents of data and actively participates in giving the data meaning. The researcher's

sensibility is of fundamental importance compared with the search for objectivity of quantitative endeavours. Researchers have to completely immerse themselves in the data, and must have a vision, an intuition, to be able to recognise relevant situations and events. Corbin talks about the 'gut feeling' of the researcher when the interpretation of data makes sense, has a logical set-up and reflects what the participants meant. The researcher's personal knowledge, experience and education informs and deepens the research process, helping him or her to understand the context, the subtleties of communication, behaviours and the meaning of events.<sup>3</sup>

### Analysis

Analysis is a dynamic process. It is both art and science, an act of interpretation that leads to other interpretations from different perspectives. More than one story can describe the data according to the approach and the vision of the researcher. It is based on concepts, the terms in which the problem is being expressed.<sup>1</sup>

There are three levels of analysis: description, interpretation and theoretical development. The first stage of analysis is characterised by the description of data. This is an activity similar to journalism, its objective being not to formulate any interpretation of the stories told by the participants, but to relate the mere facts.

The next step is conceptual ordering of data into categories, according to the vision and interpretation of the researcher. At this level, the main categories and concepts are defined and described in their properties and dimensions according to the continuous comparative method. Events are compared with each other, with bibliographic data or with data collected through other methods to find similarities and differences that are useful to define in detail the characteristics of the interpretative categories.

The third step is theoretical development. For this purpose, categories are well developed and relationships between them well defined in order to build a conceptual model that explains the phenomenon under study. A core concept provides the common denominator.

The process of analysis begins with the collection of the first data, which are then compared with the data subsequently collected.

### Study design

#### Participants

Eligible participants for the study will be all parents identified at the OPBG in Rome, Italy, in the units of oncology/haematology, cardiology and neonatal intensive care, and at the Mayo Eugenio Litta Children's Hospital (MELCH) in Rochester, Minnesota, in the units of general paediatrics, cardiac surgical intensive care and neonatal intensive care. Eligible participants must meet the following criteria:

- They must be cognitively intact.
- They must nurture, or give birth to and raise, an infant, child or adolescent, or be a relative who plays the role of guardian.
- They must have an infant or child who is being hospitalised in the unit for at least 24 hours in the OPBG or MELCH.
- They must speak and understand English (MELCH) or Italian (OPBG);

- They must have an infant or child who has experienced at least one episode of pain or a situation that had the potential for pain, but who is not currently in a critical situation.

Approval has been obtained from the OPBG Ethical Committee and the Mayo Clinic Institutional Research Board prior to conducting the study. The informed consent process will involve educating parents regarding the purpose of the study, why they are eligible and the procedures they can expect. In addition, parents will receive information about how autonomy, confidentiality, privacy, anonymity and fairness will be preserved.

### Instruments

In this study, two techniques are primarily used for data collection: the semistructured interview and observation. The semistructured interview will follow an interview guide that has been designed to probe the unknown processes of appraisal. Observation will be completed following an observation log, derived to aid the researchers in attending specifically to the parents' non-verbal behaviours that may clarify behaviours resulting from the parent appraisal.

Additionally, the child's medical record will be accessed by the researchers to determine the age of the child, the clinical condition, the documented intensity of pain, pain management approaches and parental involvement with pain management.

### Data collection and analysis

Data collection will begin in November 2008 with the first interview, which will be audiotaped and last approximately 20–40 minutes. Following the interview, observation of the parent at the child's bedside will take place for approximately 20 minutes, as well as data gathering from the medical record. According to the constant comparative method of grounded theory, this dataset will be compared with all successive or other sets of relevant data before proceeding with the following interview and possibly new concepts or ideas to probe.

The data analysis process will be completed by two teams of researchers, one team from each clinical site. Theoretical sensitivity will be supported by having members on each team with the ability to recognise what is important in the data and give it meaning. Data text from the interviews will be analysed simultaneously with the corresponding observational checklist for each subject, and each site will choose a data management program. At OPBG, we have chosen NVivo.

The research process at both sites will be shared with Sonja Meiers PhD, who has already been training the research group at OPBG through several meetings on Skype, sharing scientific

material and thoughts about the research method. We are planning to follow up on those meetings weekly, especially at the beginning of data collection, to share our findings and research strategy.

The principal investigators from the OPBG will meet after each dataset has been transcribed for analysis to share their 'memos' (defined by Strauss and Corbin as 'personal records of analysis, thoughts, interpretations, questions and directions for further data collection'), to define the conceptual categories and the next concepts to explore. The Unit for Nursing and Allied Health Continuing Education, Professional Development and Research will support the research process step by step, being involved in the data collection, analysis, appropriate storage of all data, planning of meetings and resources.

When both research groups have defined their theoretical model, there will be a major teleconference to explore whether one explanatory conceptual model would be feasible, taking into account the cultural differences between our two countries.

### Limitations

The unique cross-cultural nature of this study is perhaps its most significant limitation. However, such an approach also has the potential for most significantly highlighting cultural influences on parent appraisal of pain. The researchers will maintain rigor, accuracy and validity in their reports through the use of translation by two English-speaking Italian nurses who are members of the OPBG team, and by frequent contact between the two groups.

### Conflict of interest

None of the authors of this paper has a financial or personal relationship with other people or organisations that could inappropriately influence or bias the content of the paper. ◆

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