

REVIEW ARTICLE

# QUALITATIVE METHODOLOGY FOR REHABILITATION RESEARCH<sup>1</sup>

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**Qualitative research methodology focuses on individuals' lived experiences as they are presented in thoughts, ideas, feelings, attitudes and perceptions. In addition, the research approach emphasizes human behaviour and social interaction. It explores the quality of a phenomenon, not the quantity. This article outlines the major characteristics of qualitative research methodology and gives applications and examples. The aim of qualitative methodology is to develop new knowledge based on participants' own beliefs and experiences, not on pre-defined, testable hypotheses. It is inductive rather than deductive, and it is interpretative rather than predictive. The design is flexible, iterative and emergent and therefore requires of the researcher an ability to change and adapt the research process in accordance with emerging results. Qualitative research is thus different from quantitative research as it allows for flexibility throughout the research process. Several data collection methods can be used, such as individual interviews, focus group discussions or participant observations, in order to gain a deeper understanding of health, illness and rehabilitation. It can be used in combination with quantitative studies, but also as a research method of its own. In health research, the qualitative methodology has gained increasing credibility during the last decade. However, it is not yet frequently used in rehabilitation research. As rehabilitation outcomes are dependent on people's attitudes, thoughts and motivation regarding the rehabilitation process, and as the rehabilitation process in itself builds on social interaction, studies with a qualitative design could become useful tools in the development and improvement of rehabilitation.**

*Key words:* research interviews, focus group discussions, emergent design, Grounded Theory, scientific rigor.

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## INTRODUCTION

Qualitative methodology has gained increasing acknowledgement and acceptance in health science research in recent times (1–3). It is currently used in areas such as nursing, physical therapy and public health (4–6). Qualitative methods have, as yet, not frequently been used in rehabilitation research, but interest in this field has increased recently. Many rehabilitation researchers have begun to see a need for qualitative methodology. Murray et al. (7) presented a review of qualitative literature in 2003 based on 23 qualitative studies on stroke rehabilitation in primary care. They suggest that the findings from the review become a basis for user-focused, longer-term stroke service. Alaszewski et al. (8) published an empirical study on stroke rehabilitation in which they used semi-structured interviews, self-reported diaries and focus group discussions with stroke survivors and their carers. Younger stroke patients' experiences of a rehabilitation programme were explored with interviews, which revealed that they felt frustrated, invisible and outside of the rehabilitation organization (9). Bullington et al. (10) explored the professional understanding of chronic pain and used focus group discussions with researchers and clinicians working in a specialized pain clinic. Werner et al. (11) interviewed 6 participants in a group treatment for handling chronic pain. The authors discuss and criticise the theoretical concept of coping as being both normative and gender coded and introduce an alternative concept, "recovery competence", which builds on the in-depth interviews. The new term is an alternative concept to traditional coping theory. Work rehabilitation has also been investigated with a qualitative approach. McReynolds et al. (12) presented an overview of qualitative research methods that social scientists use in rehabilitation research. Östlund et al. (13) developed a model on "domestic strain" which was derived from individual interviews with 20 men and women about their view of rehabilitation from long-term sick leave. The authors argue that "domestic strain" reflects gender division of labour in unpaid household work and that it has to be included in strategies for rehabilitation. Ahlgren & Hammarström (14) found during individual research interviews that men and women receive different rehabilitation options.

The examples above demonstrate that qualitative approaches have been used in rehabilitation research and that they provide alternative conceptual models to traditional treatment, theories

and concepts. Furthermore, they explore human phenomena in detail. As rehabilitation outcomes are utterly dependent on patients' attitudes, thoughts and motivation regarding the rehabilitation process, and as the rehabilitation process in itself builds on social interaction, studies with a qualitative design can be useful tools in the development and improvement of rehabilitation.

In this article an outline of the main characteristics of qualitative methodology is presented, as it is described and used in health research today. The article builds on the presentation that was given at the conference "International Symposium in Measurement and Evaluation of Outcome in Rehabilitation" in Stockholm, in September 2004. I want to emphasize that it is an overview of the broad approach. As for other research traditions, the qualitative paradigm itself contains different approaches and theoretical perspectives. Therefore this presentation should be regarded as an introduction that may serve as a starting point for further studies for those readers who become interested in a deeper understanding. They are referred to further reading and to research reports within the qualitative tradition. In this paper definitions of qualitative methodology and the rationale for using this approach are presented as well as research design, sampling techniques and data collection methods. One example is given of a research project in the field of rehabilitation that has used a qualitative research design and one method of analysis is introduced, namely the Grounded Theory method of constant comparisons. A short presentation of how to establish scientific rigour in qualitative research is included. Finally, the advantages and disadvantages of using qualitative research methodology in rehabilitation research is discussed.

### DEFINITIONS OF QUALITATIVE METHODOLOGY

Researchers working with qualitative methods often receive questions from doubtful colleagues who are not familiar with this research tradition. They wonder about what it really is and how it is performed. Also, whether the knowledge obtained from this type of research is valuable and trustworthy? In the qualitative literature there is now a consensus on how to define qualitative methodology. Creswell (15) defines it in the following manner:

Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore social human problems. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants and conducts the study in a natural setting. (15: p. 15).

Morse (16) describes the research methodology as a tradition that is interpretative and which deals with the social world and how this world is interpreted, understood, experienced and produced by human beings. She also emphasizes that qualitative methodology uses research designs that are flexible and

sensitive to the social context in which the study is performed. In accordance with Creswell, Morse states that qualitative methodology involves methods of analyses and explanations that are complex, detailed and contextual. The World Health Organisation (4) argues that it is important to describe culture and behaviour of people and groups of people and that the analysis should focus on the viewpoints addressed by those being studied.

In summary, qualitative methodology deals with understanding and exploration of human's social lives. The focus is on the social and human, and on exploring culture and behaviour, both on the micro- and macro level of this social world. The quality of a phenomenon is in focus, not the quantity. It is about ordinary people's understanding and explanation of their own reality, not the researcher's preconceived views and perceptions of others' reality. Flexibility throughout the research process is important and the results are based on small samples, sometimes as small as 3–5 individuals. These definitions imply that qualitative research is inductive, i.e. moving from concrete data collected in a concrete, social reality towards abstract descriptions and analyses on a theoretical level.

### RATIONALE AND BASIC ASSUMPTIONS UNDERLYING QUALITATIVE METHODOLOGY

As the reader may have noted already, qualitative methodology is an approach quite different from traditional research methodologies used in rehabilitation research. It is distinct from statistical analysis usually applied to rehabilitation outcome measures. What is then the rationale behind this kind of research methodology? What are the basic assumptions underlying qualitative methodology? What are the scientific roots supporting it? And finally, when is it suitable to use a qualitative design?

One basic assumption in qualitative methodology is that realities are multiple and socially constructed (17). This means that they will vary between different groups of people and in different social settings. They are time and context bound. This is a social constructionist perspective (6). Realities are experienced differently depending on who is experiencing and judging them. Therefore, it is the researcher's obligation to find these differences, not to find a single truth. The view of reality as multiple and changing is an ontological assumption.

Another essential assumption adhered to the qualitative tradition is the view that the researcher and the informants (i.e. people subjected to investigation) interact with each other (17). The research process goes on between the two and they will influence each other. This is different from, and contradictory to, the notion of a neutral and distanced observer claimed in the positivistic tradition. It is related to how we regard the role of the researcher and how we obtain scientific rigour. I will elaborate further on the issue of neutrality in the final part of this paper. For now, I conclude only that

the epistemological assumption in qualitative methodology is that there is an interaction between the researcher and the informants.

A third assumption is that qualitative research is inductive, time and context bound and requires an emergent study design. The emergent design means that the researcher should be flexible and sensitive to developing ideas, themes, questions and theories throughout the whole research process (17). This is a methodological assumption. Embracing this assumption makes it difficult for the researcher to compare and estimate associations between different social contexts. The researcher looks rather for the uniqueness of a social process or phenomenon. The question of generalizability in qualitative research will also be explained in more detail at the end of this paper.

The scientific roots underlying qualitative methodology are hermeneutics, phenomenology and symbolic interactionism. Hermeneutics is an interpretive activity based on text analysis (18). It emphasizes understanding of meaning in human thought and behaviour, not explanations of causal associations. It also emphasizes a holistic approach to reality, i.e. a part-whole analysis, which means that parts can only be understood in relation to the whole and vice versa. Hermeneutic analysis has been used for a long time in nursing research as well as in other academic disciplines such as history studies and literature research. Phenomenology is a branch of philosophy that deals with the social world and how it is understood and interpreted among ordinary people. Key concepts are "lived experiences", the "lived body" and perspective of the "first and second order". The first order perspective refers to ordinary, lay notions of everyday life, whereas the second order relates to scientific interpretations and understanding (19). Symbolic interactionism is a theoretical perspective in sociology in which humans are regarded as actively participating in creating parts of their own development through interaction with the social world. Two key concepts within symbolic interactionism are "role taking" and the "I/me-relationship" (20). All these concepts are used in qualitative methodology as a basis for viewing and understanding the social world and human interaction.

### COMBINING QUALITATIVE AND QUANTITATIVE RESEARCH

Qualitative methodology can be used in many different ways in all stages of a research project. It can be used alone as a tool to deepen the understanding of certain aspects of social life, clinical work, etc. It may also be used in combination with quantitative approaches such as clinical trials or questionnaires. In order to be able to operationalize outcome measures in following quantitative studies, qualitative research interviews may be used, so that the researcher get an understanding of what is important and most crucial for those involved in the study. Sometimes clinicians need to understand and identify lay perceptions of a disease, of a disability or of body function,

or to explore the way that patients understand and explain rehabilitation. In these cases the focus is on developing concepts that later can be measured through quantitative questionnaires. One can also use qualitative methodology to evaluate and enhance existing interventions. A fourth motive for using qualitative methodology is when we want to interpret results from previous quantitative studies.

Morgan (21) argues for a thorough planning when combining the two approaches. He suggests a few strategies that will help to make clear which of the approaches is the main one (priority of research approach) and how the two approaches relate to each other in time, i.e. which of the two that we start with and what comes next (sequence of data collection methods). He outlines four possible combinations regarding decisions on priority and sequence. It is, however, important to emphasize that qualitative methodology can perfectly well be a research approach of its own, without any combination with quantitative methods, and indeed, this is the most common way to use it.

### STUDY DESIGN AND RESEARCH QUESTIONS

When planning for a qualitative study several questions have to be considered. Is the research question suitable for such a design? If so, what kind of data collection method(s) are the most appropriate? When starting to develop the specific questions it is important to have in mind that the interview guide may change and should develop along with, and reflect the ongoing simultaneous process of data collection and analysis, so called abduction (6). Type of questions used in qualitative methodology differs from quantitative, as they are more open-ended. If the questions are good, they will encourage the informants to "tell their story". The differences in questions and in the type of data that we obtain from qualitative and quantitative designs are demonstrated in Tables I and II. In Table II the questions are in a closed format allowing the respondent to answer in only one way and choosing alternatives that are most often decided by the researchers. The attitudinal statements are estimated with a 4-point modified Likert scale and can be subjected to a statistical analysis. Table I is an example of a thematized qualitative interview guide with open-ended questions. Below is an extract from an interview

Table I. *Example of a qualitative interview guide with open-ended questions 1 year after the completion of a rehabilitation programme for chronic pain patients*

#### Interview themes (open-ended questions)

1. Please tell me what you remember from the rehabilitation programme?
2. What have been useful from the things you learnt in the rehabilitation programme?
3. Are there things you have not used that you learnt? Why?
4. Please tell me about the situation at home, at work or in other parts of life after the programme?
5. And what about your experiences of pain and fatigue?
6. Would you like to tell me about your relationships with family and friends?

Table II. Extract from a questionnaire regarding former stroke patients' perceptions of a rehabilitation programme

Standardized questionnaire (closed questions)	
The rehabilitation programme provided me with good tools to live a good life after the stroke	Strongly agree Agree to some extent Do not fully agree Do not agree at all
The activities at the rehab-centre were useful for my recovery	Strongly agree Agree to some extent Do not fully agree Do not agree at all

transcript where the qualitative researcher asks open-ended questions that allow the respondent to tell her story:

*Researcher:* Can you please tell me how you experienced the rehabilitation programme at the hospital?

*Respondent:* Well, I have had good use of some of the things that I was taught . . . . . But as a matter of fact, I am not sure that it was very efficient. . . . . (silence).

*Researcher:* Can you please elaborate a bit on what you mean by that.

*Respondent:* I think the time after I came home from the hospital was even more useful. Because then I was forced to use my arm much more and by doing so I realized how much I was able to use it. At the hospital we were all quite passive . . . . . And besides that, it was first when I realized that I couldn't help my little son with his shoelaces, that I got the real motivation to struggle for recovery. It was a tough time and I remember I cried every evening and thought life was hopeless. I was not really prepared for a life outside the hospital . . . . . (sighing)."

In order to obtain good quality qualitative data it is important that the researcher has acquired skills so that he or she is able to build trust in the interview situation. If the informants find it comfortable and relaxing to speak and share their experiences, attitudes and ideas, they will do so, even if they are not always positive and in favour of, for instance the rehabilitation programme that is in focus for the investigation. The researcher will use himself or herself as a research instrument in this process and has to be able to reflect on his or her own pre-understanding of the research topic and possible biases or personal interests that may influence interpretation of the data. As qualitative research design is flexible and emergent the number of informants is usually not decided upon beforehand. Data collection continues until redundancy or saturation is reached, which means that no additional information is obtained from the last informants. If the researcher is really sure about saturation, he or she can conduct a few additional interviews. The last interviews then become a sort of validation of the emerging result (17).

Ethical considerations are of great importance in qualitative methodology because informants are few and researchers come very close to the participants' personal lives. It may be easy to disclose the identities of the participants, and therefore the researchers are obliged to develop strategies to ensure confidentiality (6).

## SAMPLING TECHNIQUES

Sampling in qualitative methodology differs from sampling in quantitative research (4). Whereas probabilistic, random sampling is a gold standard in quantitative studies, non-probabilistic samples are preferred in qualitative research. This means that the choice of study subjects is purposive and strategic. As the design is emerging along with data collection and analysis, the purposive sample allows for flexibility and changing sampling strategies throughout the research process. The sample should theoretically be representative of the study population, but it is not representative from a statistical point of view (17, 22, 23). For example, in a recently finished study on chronic pain, we wanted to explore and understand how women with fibromyalgia cope with everyday duties and work. In addition, we wanted to learn about their strategies for keeping a paid job. We started by asking 12 former patients who participated in a rehabilitation programme 4–6 years prior to the study, to write diaries for a period of 2 weeks. The only instruction given was to write about their activities during the time period. They were also asked to reflect upon the pain and to write about their strategies to cope with the pain in everyday life. From the analysis of the diaries we derived a few themes that we, in a second step, used in a thematized interview guide in 3 focus group discussions. We gathered the informants in smaller groups of 3–5 people and encouraged them to discuss the themes derived from the diaries. We had not decided on the number of focus groups beforehand, but found that 3 groups were enough for our purposes. We tape-recorded and transcribed the group discussions and conducted a qualitative analysis of them. When analysing these discussions, we realized that we needed more information from a few of the participants, in order fully to understand their meaning. In a final step of this investigation, we conducted 2 individual research interviews. The 2 informants being interviewed were judged as having additional information that was theoretically important for the development of the final result. The example demonstrates that we used a flexible, emergent research design, that the questions developed throughout the study and that the sampling procedure was not decided beforehand. This sampling strategy is called a theoretical sampling as it follows and changes along with the emerging theory or, in this case, the emerging model.

The World Health Organisation (4) has suggested several sampling techniques for qualitative methodology, of which I will mention 4. Maximum variation means that the chosen informants are different from each other in as many aspects as possible. It is important to decide the inclusion criteria so that the variation is captured. Another technique is called snowball or chain sampling. This can be used when we do not know how to reach the people that we want to include in a study. We can then start by interviewing 1 person and by the end of the interview, ask the informant to point out another person who is similar or different from him and whom he believes will provide further information. A homogeneous sample is used when we search for people who are similar in certain aspects.

In other studies we may want to include those who have extreme opinions or who are deviant from the majority of people. Then we use a sampling technique called deviant, or extreme cases. However, sometimes one can find qualitative studies that use random sample, even though it is not common. It is then important for the authors to justify why they have used this sampling strategy instead of a purposive sample recommended in qualitative methodology.

## QUALITATIVE DATA COLLECTION METHODS

Many researchers in rehabilitation research use large-scale questionnaires to study patients' attitudes and perceptions of, for instance, the rehabilitation process. Sometimes questionnaires are sufficient in order to capture these attitudes, but there is a danger that they provide data on a rather superficial level. They do not give enough information about detailed aspects of human life and are usually too restricted if one really wants to research in depth people's thoughts and experiences. Here qualitative research interviews may serve as a more suitable data collection method (23). Research interviews generate rich data about perceptions, feelings, experiences, motives, attitudes and knowledge among individuals. The qualitative research interview is usually performed on a conversational basis, meaning that the researcher uses rather loose, broad and open-ended questions or interview themes in a thematic interview guide. The aim is to encourage the informant to talk. Kvale (23) states that a good qualitative research interview is one where the informant talks and the researcher is silently listening most of the time and only probes on things she/he hears during the interview. Sometimes the qualitative researcher may use a semi-structured interview form with more or less closed questions. It is however, not common to use only structured and closed format of questions similar to questions in a questionnaire. The interviews are most often tape-recorded and transcribed verbatim directly afterwards. However, sometimes researchers prefer to use the tape without a transcription, as the basis for analysis.

If the aim of the research instead is to develop and increase knowledge about how groups of people think and act, i.e. internal cultures, norms and values on a group level, we may choose to use focus group discussions as a tool for data collection (24–26). In focus group discussions the questions or the themes are concentrated on a few topics and the aim is to create a focussed discussion among the participants in the group. In the literature on focus group discussions, one can see different advice on how many participants there should be in the groups to be able to start a reflective discussion among the participants. Some authors argue for rather large groups of as many as 6–12 participants (24–25), whereas others argue for smaller groups of 3–5 informants (26). The smaller groups are usually more suitable in health science research as they facilitate closer interaction and communication. For the moderator, smaller groups are also easier to manage.

A third method for data collection is to conduct participant observations (27). This is used when we aim to understand and explore people's behaviour in their specific social contexts, for instance to analyse how disabled children interact with other children in school, or when we aim to study how confused elderly patients orient themselves when coming to a hospital ward. The observations can be conducted both overtly and covertly and the researcher has to judge thoroughly the ethical aspects of these different strategies. Observational studies may use videotaping to help in the analysis of human interaction.

Other forms of data collection are reflective diaries or medical records. Rapid assessment procedures are often used (28). One such procedure is ranking, meaning that respondents rank, for instance, different diseases in order of severity. It will provide an understanding of mental maps and lay thinking. When working with young people, pictures, photos and mental maps can be helpful and used as parts of a data collection method. To write extensive field notes during the data collection and memos during analysis is essential. These notes are used along with other material in the analysis.

## QUALITATIVE DATA ANALYSIS

In qualitative health research 3 methods for analysis are most frequently adopted; content analysis (29), Grounded Theory (30–31) and phenomenology (32). The Grounded Theory method of constant comparison is described briefly. Glaser & Strauss (30) developed and introduced this method in the 1960s. It is used frequently and provides a comprehensive framework for the analysis.

### *The Grounded Theory method of constant comparison*

Grounded Theory is an approach that seeks to develop theory or hypothesis from qualitative data. The developed theory should thus be grounded in data. During the process of analysis, categories are derived from a concrete level of data. The categories must be meaningful and relevant and should describe the phenomenon under study. A grounded theory is built up by sub-categories and a core category that have certain properties and dimensions. In the Grounded Theory literature, there are several slightly different ways of describing the procedure of data analysis. I will here refer to Dahlgren et al. (6) in the description of analysis. The first step in a Grounded Theory analysis is to read the transcripts and write down concepts and terms that capture the content of the text. This initial process is called open coding. The open coding process results in a set of open codes. Next step is to find common features among the open codes, to group these open codes together in larger parts, and label the groups. This is a process labelled categorizing. The product of this activity will be a certain number of categories. When we have identified the categories, it is crucial to decide which of the categories is the most important, is observed frequently and reflects the core of the data. This category then becomes the core category. In

a third step, the interview transcripts are re-read and the researcher selectively searches for the categories and the core category. This is called selective coding. The categories may have certain characteristics, i.e. properties, and the properties may be situated somewhere on a continuum, i.e. they have dimensions. For an elaboration of properties and dimensions, see Dahlgren et al. (6), and Strauss & Corbin (33). Next step is to find axes and relations between the categories, the linking process. How do the categories relate to each other? The final result is usually presented as a model, a theory or a hypothesis. However, the model is theoretical and the axes between categories should not be seen as associations or correlations from a statistical perspective.

Computer software can be used in the qualitative analysis. One such programme is Open Code, which is freeware that can be downloaded from the Internet (34). It has been developed by colleagues at Umeå University and is helpful in the first step of a Grounded Theory analysis. Other softwares are NUDIST and Ethnograph (35–36). However, it is important to emphasize that computer programmes can never help in the thinking, analytical process engaged in all research, regardless of methodology.

#### *One example from rehabilitation research*

The following study, using a Grounded Theory approach, was published in the *Journal of Rehabilitation Medicine* in 2004 (37). The aim was to describe and analyse how participants experienced a rehabilitation programme for musculoskeletal pain problems 1 year after completion. Data were collected through individual interviews and a semi-structured interview guide was used. We interviewed 16 women from a rural area of Sweden, aged 23–49 years. They had all participated in a rehabilitation programme. They were interviewed 1 year after completion of the programme. First we read and coded the texts separately. The authors then met several times and negotiated about the final result. In the Grounded Theory analysis, different categories emerged after the open coding of the texts. Below is a short extract from one of the interviews.

When I had a lot of pain, I wanted to manage anyway, but now I don't care a bit about that. If I have decided to do the cleaning the next day, and then don't feel well, I skip it... I think I demanded more of myself before (the programme). (Informant no. 19)

We decided to label this part of the text “setting limits” and “adjusting work load”. Other parts of the interview that dealt with the same meaning or content were labelled the same. During the whole process of analysis, we constantly compared the interviews, both with each other but also comparisons within the same interview. Finally, the concept “setting limits” seemed to be so important that it became a category in the model that we developed based on the 16 interviews (Fig. 1) Three additional categories were derived from the material; Developing body knowledge/awareness, Changing self image and Negative counterbalancing factors. The category “From

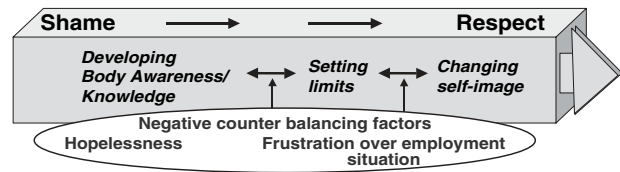


Fig. 1. The process of change from shame to respect experienced by chronic pain patients 1 year after a rehabilitation programme (37).

shame to respect” was the most important aspect of the informants’ stories about their experiences of the rehabilitation programme. Accordingly, this category became the core category that serves as an umbrella for the other categories. The main result “From shame to respect” represents the process of change that the informants described. They had moved from one side of the dimensional continuum towards the other side, from a shameful and bad situation to a more respectful and empowered situation (Fig. 2).

## SCIENTIFIC RIGOUR IN QUALITATIVE RESEARCH

Traditionally 4 questions are in focus when we want to judge scientific rigour in any research. The first question deals with the truth value of the findings. In quantitative research this applies to internal validity. A second question concerns applicability. Quantitative researchers judge this through external validity or generalizability. Thirdly, consistency is in focus, which is a question of reliability in quantitative research. And finally, the question of neutrality has to be judged, which in quantitative research is connected to the notion of objectivity. It is of course as important in qualitative methodology as in quantitative traditions to establish trustworthiness. As the design and the research questions differ as well as the basic assumptions and the ontological understanding, qualitative methodology uses slightly different terms and strategies when trying to establish trustworthiness. I will in the following text present the concepts and related techniques presented by Lincoln & Guba (17).

Credibility is the term used in qualitative methodology to answer questions about the truth value. As one of the basic assumptions in qualitative methodology is that realities are multiple, credibility refers to the researcher’s ability to capture these realities. Has he or she really understood and described the informants well enough? Would it be possible for other people to recognize themselves, or the context that we describe? Several techniques have been developed in order to increase credibility in a qualitative study, of which the most frequently used are prolonged engagement, triangulation, peer debriefing and member checking. Prolonged engagement refers to our efforts to really understand and become acquainted with the social context under study and the people in this context. When writing the report, researchers can describe how they made these efforts. Triangulation means that we try to view the

Category	Property	Dimension
Developing body awareness/ Body knowledge	Relaxation Body Awareness (BAT) Exercise Theory	impossible → means of pain relief unawareness → awareness for preventing deterioration cause of pain → important for improvement ignorant → knowledgeable
Setting limits	Oneself Workload Tell others about FMS	high demands of self → reduce demands on self chaotic → anticipate workload hard to explain → knowledge makes explanations plain
Changing self-image	Boundaries, because of sickness Handling the pain Self-image Household work Interests	feel a failure → own action meaningful suppression, avoidance → self-examination weak → tougher satisfy others → restrict house work miss healthy life → develop new interest
Negative counterbalancing factors	Hopelessness Frustration	no hope for recovery → optimism dissatisfaction → satisfaction

Fig. 2. Categories, properties and dimensions under the core category “From shame to respect” (37).

research problem from different angles, for example by engaging several data collection methods, a team of researchers with different professional background or the use of different theories to “mirror” the developing results. Peer debriefing refers to a technique where the emerging concepts, themes or model are presented to colleagues outside the project, for instance in a seminar discussion. Do they find the results relevant, reasonable and logical? We can also check the emerging results by asking our informants, i.e. member checking. Do they recognize themselves in the descriptions? Sometimes we write a summary of the interviews and send it to the informants or we go back to them and present parts of the interpretations of the material (17).

Applicability relates in qualitative methodology to the concept transferability. As qualitative samples are small, non-probabilistic and as the research deals with detailed, in-depth analyses rather than large-scale population-based studies, it is not possible to generalize the findings using traditional statistical inference. There are mainly 2 different stances here within the qualitative paradigm. The first says that the qualitative researcher aims at obtaining analytical generalization. Qualitative methodology strives to capture human life, thought, interaction and social contexts. Therefore, the knowledge obtained from these studies should be transferable to other similar social contexts (17). The developed theory should fit and be applicable beyond the study population from a theoretical point of view. Theory competence is therefore a prerequisite in qualitative methodology (23). The second stance claims that qualitative researchers never deal with the question of generalizability. They claim that the detailed, in-depth and small-scale descriptions are good enough and can alone present a view of the world. The readers of qualitative publications are the ones judging the value and the applicability of the findings (17).

Instead of consistency and reliability, qualitative researchers talk about dependability. The term refers to the epistemological notion that researcher and study subjects are interrelated and interacting with each other, thus also influencing each other. And as perceived realities are constantly changing, questions of replicability are not in focus. Dependability instead relates to the ability of the researcher to be flexible and change perspective in accordance with the emerging process. The technique proposed by Lincoln & Guba (17) is called audit trail and refers to a strategy whereby the research process is documented and described in detail and preserved for eventual audits. It should thus be possible for outsiders to follow all steps and decisions in this process.

Neutrality is viewed slightly differently in qualitative methodology than in quantitative research. Again this is due to the ontological, scientific and epistemological understandings in qualitative methodology. Lincoln & Guba argue that it is always difficult to obtain truly objective and neutral research, even in quantitative studies. We are all coloured by previous knowledge, experiences and hypotheses and it is important that the researcher reflects upon his or her previous understanding. In qualitative methodology neutrality does not refer to the traditional notion of a distanced and neutral observer of the study object. Instead the term “confirmability” is used, which refers to the researcher’s ability to be neutral to data. Confirmability is also checked by an audit trail, this time meaning that the auditor should be able to find the derived qualitative results well grounded in data (17).

### CONCLUSION

Qualitative methodology is an approach that should be regarded as an independent research tradition that engages in developing

new knowledge about human interaction, thoughts, experiences, behaviour and culture. One of its advantages is that it is a rather democratic process as it gives the informants a voice, for instance patients and clients in healthcare settings. Sometimes qualitative methodology is action-oriented, aiming to change practices and hierarchies. When using a Grounded theory approach, new models and hypothesis emerge from a concrete level of data. Doing qualitative research is very much an innovative and open-minded activity. One disadvantage is, of course, that it is a much younger research tradition than the quantitative one, at least within the field of health and medicine. Therefore it is not as tested as quantitative methods. It is sometimes regarded as very time-consuming, which is another disadvantage.

Rehabilitation research has the potential for developing this type of research. By listening to patients and relatives, rehabilitation activities could be improved. In addition, it can help professionals to understand patients' and clients' perceptions of disability, recovery, body function and chronic illness. Qualitative researchers in rehabilitation can generate new models and theories and develop methods for evaluation of rehabilitation. And, finally, combining the two research approaches may help bridge the gap between qualitative and quantitative methodology.

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