



A Purposeful Approach to the Constant Comparative Method in the Analysis of Qualitative Interviews

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Abstract. The constant comparative method (CCM) together with theoretical sampling constitute the core of qualitative analysis in the grounded theory approach and in other types of qualitative research. Since the application of the method remains rather unclear, researchers do not know how to 'go about' the CCM in their research practice. This study contributes to a purposeful approach of the CCM in order to systematize the analysis process and to increase the traceability and verification of the analyses. The step by step approach is derived from and illustrated with an empirical study into the experience of multiple sclerosis (MS) by patients and their spousal care providers. In this study five different steps were distinguished on the basis of four criteria: (1) the data involved and the overall analysis activities, (2) the aim, (3) the results and (4) the questions asked. It is concluded that systematization of qualitative analysis results from the researcher using a sound plan for conducting CCM regarding these four aspects.

Key words: qualitative research, constant comparative method, grounded theory, qualitative analysis, interviews

1. Introduction

The constant comparative method (CCM) together with theoretical sampling constitute the core of qualitative analysis in the grounded theory approach developed by Glaser and Strauss (Glaser and Strauss, 1967; Strauss, 1987; Glaser, 1992). Comparison is also the dominant principle of the analysis process in other traditions of qualitative research. All kinds of aids, such as memo writing, close reading and rereading, coding, displays, data matrices and diagrams support the principle of comparison. Many academic works have offered interpretations, explanations and illustrations of grounded theory, as well as providing relevant techniques, procedures and rules of thumb (Strauss and Corbin, 1998; Wester, 1995; Denzin and

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Lincoln, 1994; Strauss, 1987; Chenitz and Swanson, 1986; Miles and Huberman, 1984).

Although much has been written about these methods and techniques, this is yet not the case for the important CCM. Researchers often describe at great length how their studies were carried out, but remain vague when it comes to giving an account of the analysis. Issues such as the subject of the comparison, the phase of the research in which it took place, the reason for the comparison and the results of the comparison remain unclear. It is this lack of explication and account that reduces verification and therefore the credibility of qualitative reports. A purposeful approach that can be used by researchers will not only systematize their work, but will also increase traceability when they describe how they used and implemented the approach in their research practice.

This article aims to contribute to the development of such an approach for CCM. Our own empirical research into couples coping with the chronic illness multiple sclerosis is used to illustrate different types of comparison in a grounded theory process. From this 'logic-in-use' we want to move towards a 'reconstructed logic', that enables others to purposefully carry out their analysis. It is not so important whether their studies involve interviews with dyads or with individuals. The point of concern is the systematization of the analysis process. The following questions are examined:

1. How varied are the comparative moments according to which elements are compared with each other?
2. What are the aims of the different types of comparison and to what results in research do they lead?
3. How do different types of comparison relate to each other?

By answering these questions we hope to make the unclear process of constant comparative analysis more transparent. In the next section, we start with the principle of constant comparison and its place in qualitative analysis. Secondly, the focus is on the lack of practical rules of how to 'go about' constant comparison. Then, the step by step approach is introduced and the different steps are described. In the following section an example is given that illustrates each step and finally we come up with a conclusion.

2. The Principle of Constant Comparison

In the work of Glaser and Strauss constant comparison is important in developing a theory that is grounded in the data. Tesch (1990) adopts this view when she calls comparison the main intellectual activity that underlies all analysis in grounded theory:

The main intellectual tool is comparison. The method of comparing and contrasting is used for practically all intellectual tasks during analysis: forming categories, establishing the boundaries of the categories, assigning the segments to categories, summarizing the content of each category, finding

negative evidence, etc. The goal is to discern conceptual similarities, to refine the discriminative power of categories, and to discover patterns. (Tesch, 1990: 96)

By comparing, the researcher is able to do what is necessary to develop a theory more or less inductively, namely categorizing, coding, delineating categories and connecting them. Constant comparison goes hand in hand with *theoretical sampling*. This principle implies that the researcher decides what data will be gathered next and where to find them on the basis of provisional theoretical ideas. In this way it is possible to answer questions that have arisen from the analysis of and reflection on previous data. Such questions concern interpretations of phenomena as well as boundaries of categories, assigning segments or finding relations between categories. The data in hand are then analysed again and compared with the new data. The units should be chosen with great care and in a way that enables questions, new or otherwise, to be answered efficiently and effectively, thereby allowing the process of analysis and in particular the comparative process to progress. The cycle of comparison and reflection on 'old' and 'new' material can be repeated several times. It is only when new cases do not bring any new information to light that categories can be described as saturated. This means that these cases can be easily assigned to one of the already existent categories in the growing theory.

Comparisons that are highly regarded increase the internal validity of the findings. One criterion for qualitative research is that the researcher tries to describe and conceptualise the variety that exists within the subject under study. Variation or range exists by the grace of comparison and looking for commonalities and differences in behaviour, reasons, attitudes, perspectives and so on. Finally, constant comparison is connected with external validity. When the sampling has been conducted well in a reasonably homogeneous sample, there is a solid basis for generalizing the concepts and the relations between them to units that were absent from the sample, but which represent the same phenomenon. The conceptual model can even be transferred to different substantial fields that show similarities with the original field. Glaser and Strauss (1965) illustrate that the concept of awareness context (what each participant knows about the identity of the other) can explain interactions in international espionage and between hospital staff and a dying patient.

3. How to Go About Constant Comparison

The literature does not make clear how one should 'go about' constant comparison, nor does it address such issues as whether different types of comparison can be distinguished. Morse and Field (1998: 130) state that each piece of data must be compared with every other piece of relevant data. Although this might be true, it is not a very practical rule, since the question of what a researcher judges to be relevant remains unanswered. Like other authors, Schwandt (1997) in his *Diction-*

ary of Terms indicates the functions of CCM without describing the procedure for carrying it out.

According to Strauss and Corbin (1998) the art of comparison has to do with creative processes and with the interplay between data and researcher when gathering and analysing data. Beside 'close-in' comparisons that serve the more traditional functions mentioned above, they distinguish so-called 'far-out' comparisons. The latter are more extreme and make greater demands on creativity, including as it does comparisons with metaphors and parables. This type is intended to explicate the influence of self-evident assumptions and interpretations on the analysis and contributes to the formulation of alternative interpretations and questions. Despite pointing out the aim of CCM, the application of the methods and techniques remains rather unclear. There is more to this process than just comparing everything that crosses the researcher's path. The lack of clear-cut questions and a prior coding system means that data have to be produced by the researcher in the course of the study. It is necessary to understand the 'production' procedure, which takes place primarily at the data analysis stage, in order to judge the value of a study.

4. Towards a Step by Step Approach for Constant Comparison

From a thorough examination of our own experiences with qualitative analysis, we have attempted to develop a procedure for the CCM. The approach described consists of different steps that will be illustrated with reference to a study of couples coping with the effects of multiple sclerosis or MS for short (Boeije et al., 1999). In this study both partners from 20 married couples were interviewed. The research questions deal with the patients' individual lives, the lives of their spouses who care for them and their relationships. Accordingly, the analysis level shifted from the group of patients and the group of spouses to the couples.

The texts that resulted from transcription of the interviews provided the input for the analysis process used to make sense of the data and to reconstruct the perspectives of the groups being studied. The analysis consisted of two activities, namely fragmenting and connecting (Dey, 1993). Both strands are necessary and keep each other in equilibrium. The former emphasizes the separate themes which emerge during the interview and focuses on an individual ordering process which is relevant to the research questions. The process of fragmenting lifts the coded pieces out of the context of the interview as a whole. This process of code-and-retrieve was conducted using the WinMAX computer program for qualitative analysis (Kuckartz, 1998). The latter activity accentuates the context and richness of the data as the interview parts were interpreted as a whole and the pieces of one case were connected (Sivesind, 1999).

From this empirical study a five-step analysis procedure was derived. We emphasize again that the number of steps as such is not important, because that

depends on the kind of material that is involved. As our study involved dyads we ended up with five steps:

1. Comparison within a single interview.
2. Comparison between interviews within the same group.
3. Comparison of interviews from different groups.
4. Comparison in pairs at the level of the couple.
5. Comparing couples.

It emerged that the comparisons made differed on four criteria, namely (1) the data or material involved and the overall analysis activities; (2) the aim; (3) the questions asked and (4) the results. The sections describing the five steps all follow the structure of these criteria. Each step is summarized in Table I.

4.1. STEP 1: COMPARISON WITHIN A SINGLE INTERVIEW

Description

At the start of the research the comparison is conducted within one interview. In the process of open coding, every passage of the interview is studied to determine what exactly has been said and to label each passage with an adequate code. By comparing different parts of the interview, the consistency of the interview as a whole is examined. For example, clarification is needed if an interviewee says that he has no difficulty with the physical dependency caused by MS in one part of the interview but indicates elsewhere in the interview that feeling dependent causes him problems.

If one fragment is given the label 'dependence', the researcher studies the interview for other fragments that should be given the same code. If a reference is made to the same category more than once in the course of an interview, the fragments relating to this category are compared in order to find out whether new information about this category is given or whether the same information is repeated. The fragments are then subjected to further comparison to find out what they have in common, how they differ, in what context the interviewee made the remarks and which dimensions or aspects of dependence are highlighted.

Aim

The aim of this internal comparison in the context of the open coding process, is to develop categories and to label them with the most appropriate codes. In this way it is possible to formulate the core message of the interview with the codes that are attached to it and to understand the interview including any difficulties, highlights and inconsistencies. It represents an attempt to interpret the parts of the interview in the context of the entire story as it has been told to us by the interviewee.

Table 1. Different steps of the constant comparative analysis procedure in keywords

Type of comparison and	Analysis activities	Aim	Questions	Results
1. Comparison within a single interview	Open coding; summarizing core of the interview; finding consensus on interpretation of fragments.	Develop categories understanding	What is the core message of the interview? How are different fragments related? Is the interview consistent? Are there contradictions? What do fragments with the same code have in common?	Summary of the interview; Provisional codes (code tree); Conceptual profile; Extended memos.
2. Comparison between interviews within the same group that is persons who share the same experience	Axial coding; formulating criteria for comparing interviews; hypothesizing about patterns and types.	Conceptualization of the subject produce a typology	Is A talking about the same as B? What do both interviews reveal about the category? What combinations of concepts occur? What interpretations exist for this? What are the similarities and differences between interviews A, B, C...? What criteria underlie this comparison?	Expansion of code words until all relevant themes are covered; Description of concepts; Criteria for comparing interviews; Clusters of interviews (typology).
3. Comparison of interviews from groups with different perspectives but involved with the subject under study	Triangulating data sources.	Complete the picture enrich the information	What does group 1 say about certain themes and what does group 2 have to say about the same themes? What themes appear in group 1 but not in group 2 and vice versa? Why do they see things similarly or differently? What nuances, details or new information does group 2 supply about group 1?	Verification of provisional knowledge of interviewees from group 1; Additional information; Memos.
4. Comparison in pairs of interviews with two partners belonging to a couple	Selecting themes from open coding that concern the relationship; summarizing the relationship; finding consensus on the interpretation.	Conceptualization of relationship issues understanding of the interaction between partners	What is the relationship like from both perspectives? Are there contradictions/agreements between them? What are the central issues and how are they resolved?	(Conceptual) profile of relationship; Extended memos; Inventory of central issues.
5. Comparing interviews with several couples	Finding criteria to compare couples; hypothesizing about patterns and types.	Find criteria for mutual comparison produce a typology	What are the typical differences between couples A and B? What is the possible reason for this? On which criteria can couples be compared? What patterns exist in the relationships of couples that experience this phenomenon?	Criteria for comparing couples; Clusters of relationships (typology).

Important Questions

Important questions regarding comparison in this first phase of analysis are:

- Which codes are used to label the categories in this particular interview? What characteristics do fragments with the same code have in common?
- What is the core message of this interviewee?
- Is the storyline consistent? Are there any expressions that are contradictory? How are all the fragments related?

Results

The initial analysis generates a number of results. The first result is a summary of each interview. The second is a list of provisional codes (a code tree) which is the beginning of the process of conceptualization. The third result is the distillation of the interview into an inventory of provisional codes or a conceptual profile. The fourth result consists of memos which describe the analysis process.

4.2. STEP 2: COMPARISON BETWEEN INTERVIEWS WITHIN THE SAME GROUP

Description

All new interviews conducted are treated as described above. Memos, codes and codings increase as a result. As soon as more than one interview has been conducted, the interviews are compared. The comparison in this step is between interviews within the same group, which means persons who share the same experience, in our example persons who are having to cope with MS. The first five interviews were selected with a view to exploring the subject and obtaining a variety of research subjects. Once more information had been obtained, patients were selected more carefully in order to answer the questions raised by the comparison process. The selection therefore became more closely tied to theoretical ideas and hypotheses which of course were provisional and needed to be verified in other cases. Firstly, it is important to compare fragments from different interviews that the researcher has interpreted as dealing with the same theme and that have been given the same code (axial coding). By making an inventory of characteristics of each category it was possible to describe and even define some concepts, for instance what dependency means in the context of MS. In the research, these 'themes' function as criteria for the systematic comparison of the interviews. By comparing it becomes evident that some interviews can be grouped together because they are similar with regard to certain criteria.

In many cases, some codes are combined with other codes and form a pattern. Other interviews do not fit this pattern. It is therefore important to look for patterns or, in other words, for combinations of categories or codes. The analysis revealed that interviewees coped with dependency in very different ways. To find out why, to identify the conditions that apply and the consequences that result, it is necessary

to compare interviews as a whole. This analysis was mainly done in the meetings of the research team, where a typology was constructed.

Aim

The *aim* of this step is to further develop the conceptualization of the subject. To this end, axial coding is used. This means searching for indicators and characteristics for each concept in order to define that concept. A second aim is to discover the combinations of codes which exist. This produces clusters or a typology. In our example a typology of people with MS who deal with their disease in a particular way.

Questions

In this phase the following questions are of importance:

- Is interviewee A talking about the same category as B? What do both interviews tell us about the category?
- What are the similarities and differences between interviews A, B, C ... ?
- What are the criteria underlying this comparison?
- What combinations of codes/concepts occur? What interpretations exist for this?

Results

This step results in an extension of the amount of codes (the code tree) until no more codes are needed to cover all the various, relevant themes contained in the interviews. The relevant parts of the interviews are those that say something about the research questions. When all the coded segments that belong to a given code are put together, it becomes possible to discover all the relevant characteristics of this concept in a substantial field and to describe the concept. The researcher then goes about identifying the criteria on which some interviews differ from others. Together these criteria constitute the dimensions on which a typology can be constructed. These different dimensions are mostly governed by patterns or combinations of codes. These combinations form profiles, clusters or types (see for the use of typologies Layder, 1993: 137).

4.3. STEP 3: COMPARISON OF INTERVIEWS FROM DIFFERENT GROUPS

Description

It is important to give data triangulation a central place in qualitative analysis (Kimchi et al., 1991). In this third step, interviews from two different groups are compared with regard to the experience of a specific phenomenon. In the MS study this was done by interviewing the spouses of the MS patients. The interviews with the spouses were conducted in the same way as the interviews with the patients,

with a view to obtaining additional information from the perspective of the care providing spouses as one of our research questions was concerned with this topic. The interviews with the spouses were also used to arrive at a better understanding of the patients' perspectives and strategies. The care providing spouses were asked to give their opinions on how their partners were dealing with their illness and the answers were compared to those of the patients themselves. Spouses sometimes gave different examples than the patients and touched on themes that placed the patients' experiences in a broader context.

Aim

The aim of comparing the interviews of persons with a specific experience with the interviews of others who are involved but are not undergoing the experience themselves (e.g., patients and their spouses) is to complete the picture already obtained and to enrich the information on the first group, i.e., the patients. A comparison between the interview of a patient and his or her spouse can also be used to validate the patient's story either confirming the story or casting doubt on it.

Questions

The important questions posed in this step are:

- What does group 1 say about certain themes and what does group 2 have to say about the same themes?
- Which themes appear in one group but not in the other group and vice versa?
- Why do both groups view issues similarly or differently?
- What nuances, additional detail or new information does the other group supply about the group of our interest?

Results

This comparison does not really provide a new directory of code words or a new order. This step is aimed at deepening the insights and completing the information about the group of patients which has been the focus of our interest until this point. Naturally, new memos are made.

4.4. STEP 4: COMPARISON IN PAIRS AT THE LEVEL OF THE COUPLE

Description

The comparison in this phase takes place in pairs. The difference between this step and the preceding ones is the level of analysis. It concerns both partners belonging to a couple so the level is dyadic. It may be clear that such a step can also involve other dyads, like a parent and a child, a teacher and a pupil or an employer and an employee. Accordingly, the codes from the open coding process in the first

step are examined for relationship issues. In fact, open coding took place on relationship issues at that stage and memos were made about the interpretation of the relationship.

The interaction between the two individuals can be reconstructed from what both partners say about each other and about their relationship. The comparison produces insights into similarities and differences in perspective, how issues are solved, how communication takes place, agreement or disagreement on relevant themes, and so on. These findings with respect to content are conceptualized in the same way as the themes found to be relevant in steps one and two. The relationship seen from two different angles is more complex than the experience of one person. So it is possible that saturation will not be reached until more couples are selected.

Aim

The aim of comparison in pairs is to find information about issues concerning the couple from both perspectives. This step aims at a greater knowledge about the interactions between the partners and the constitution of the relationship.

Questions

The questions asked are:

- What is the relationship like from both perspectives? How can it be typified or summarized?
- Which codes are used to cover the core issues?
- Are there contradictions between partners or do they agree with each other on most issues?
- What are the central issues the couple has to cope with and how are they resolved?

Results

The results are comparable with those of the first step. The first result is a conceptual summary of the relationship. The second result provides a clue to the central issues that couples have to deal with in a specific situation, i.e., facing a chronic illness. These central issues can lead to criteria on which to compare couples. The third result constitutes extended memos concentrating on the dyadic level instead of the individual level.

4.5. STEP 5: COMPARING COUPLES

Description

The final stage of comparison is between couples who share the same experience. This also takes place on the couple level and not on the individual level. Comparison between couples can begin as soon as more than one couple is involved in the

research. The comparison in this step is the most complex of all. First, it implies interviews from two different perspectives, namely individuals who are involved but do not share exactly the same experience, i.e., one of them ill and the other providing care. Second, an image of the relationship emerges from what the two individuals relate. Accordingly it is a form of aggregation but one that takes account of the two stories being told. Third, even a comparison between only two couples involves at least four interviews. This complicates the intellectual overview.

Aim

The aim is to further conceptualize the issues concerning the relationship and to find criteria for the mutual comparison of couples. These criteria follow from the core issues couples apparently have to deal with and serve as some kind of a coding scheme for the analysis of new couples. Finally, a model or pattern of relationships can be developed by comparing the couples.

Questions

The important questions in this step are:

- What are the typical differences between couples A and B? What is the possible reason for this? To what is it connected?
- On which criteria can couples be compared?
- What patterns exist in the relationships of couples that experience this phenomenon?

Results

The result of this analysis step is an inventory of criteria for comparing the couples. Another result is a pattern of couples. This pattern is based on finding the dimensions that can serve as criteria for discriminating between different relationships.

5. An Illustration of the Step by Step Approach

In this section the step by step approach is exemplified with our empirical research into people with multiple sclerosis (MS). Although we could have used several couples to illustrate our point, we often use a single couple (4). We believe that once the line of an interview is understood, the example is easier to comprehend.

The comparative activities in the *first step* are conducted within one interview. Therefore we start with looking at a fragment from an interview with a male patient designated as P4. This man obviously has aims left that are worthwhile and he organizes his life as well as he can in order to reach his goals. He has many people helping him and who even take his place whenever he must withdraw. In this text segment he tells us about his dependency caused by MS and how he and his family

deal with that. After presenting this segment some codes and codings are presented. When the different paragraphs within the segment are compared it becomes clear that some deal with the same theme and are therefore labelled with the same code, for example 'coping strategy' or 'dependency'. One paragraph or even one sentence can have different codes attached to it. Sometimes codes constitute two elements: a main category and a specification of that category. For instance 'coping strategy: ms not the upper hand'.

Section of an Interview with P4 on September 27th, 1997

P(atient): Euh, I have it [multiple sclerosis] now for twelve years, as far as I know thus. And I have the progressive type, so it has gone very fast and I also became dependent very fast. Well, how do I deal with it? I don't know, in an ordinary way I think. From the beginning and after we went through the first blow, we have said MS will never have the upper hand. Three people sit around this table and there are four chairs and one chair is for MS. And more place it is not going to get. And so it is, we live with MS, but as much as possible we live our own lives. We go on holiday independently, weekends away, or days, etc. But dependent on my physical situation of course. For my wife it must be as free as possible and then it is a burden anyway. Because she is constantly busy with me.

I(nterviewer): What do you mean when you say there are four chairs and one of them is for MS?

P: MS has been given a place in our lives, but MS is not the head of our table. We noticed that in some families MS rules their lives. And we don't need that. I am a member of committees and I go to work for two days a week. Although I have someone to replace me when I can't go, because I am not such a dreamer that I think that I can always do everything. I must have the possibility to withdraw without feeling guilty. But with everything I promise to others I have to accept that I have to confer with my family whether I can promise to do it or not because one of my family members has to accompany me.

I: What is that like for you?

P: Well, for me it is not that hard, because we are very open about it in this family and also to outsiders. We understand each other very well. And my family sometimes puts me in my place when I ask too much of them.

Some of the codes that are attached to these paragraphs are:

MS has been given a place in our lives, but MS is not the head of our table. We noticed that in some families MS rules their lives. And we don't need that.
CODES: *integration; coping strategy: MS not the upper hand*

But with everything I promise to others I have to accept that I have to confer with my family whether I can promise to do it or not because one of my

family members has to accompany me.
 CODES: *dependency; family: confer*

Well, for me it is not that hard, because we are very open about it in this family and also to outsiders. We understand each other very well. And my family sometimes puts me in my place when I ask too much of them.
 CODES: *family: open communication; self-critical*

Well, how do I deal with it? I don't know, in an ordinary way I think. From the beginning and after we went through the first blow, we have said MS will never have the upper hand. Three people sit around this table and there are four chairs and one chair is for MS. And more place it is not going to get.
 CODES: *coping strategy: MS not the upper hand; normalizing*

In order to extend the comparative analysis to other interviews in the same group, *step 2*, new patients were selected. At the start of our study these were selected in such a way that a relatively heterogeneous population was constituted. For instance, both male and female patients were selected, because it was thought that the question of whether the wife or the husband falls ill or becomes a care provider might make a difference in terms of family roles. Among the important themes to emerge were adaptation to the disease, integration into daily life and the perceived support of the spouse. As a consequence we wanted to select patients who differed with respect to these themes.

As an example we show some fragments of an interview with another male patient, P25, who shows a sharp contrast with P4. P25 can not adapt his life to MS in any way. Everything that made his life worthwhile is lost and he is unable to make sense of his 'crippled and inactive' life. Parts of his story touch on themes that are also present in the interview with P4. As a consequence they have been given the same codes, but they are brought up by P25 in a very different context from that of P4.

Some Codes and Coded Segments of Interview Excerpts P25

But I try to set that MS aside, so that it doesn't become a milestone. But that is difficult. Every day I start at the same level and every day I make the transfer from bed to chair. I always was an active person and now I cannot even walk and I am tired all the time. I have trouble putting MS aside, because I am confronted with it every time. Sometimes I am inclined to do nothing at all anymore. I feel rebellious and the dominant feeling about the whole situation is powerlessness. Yes, it's a disaster because there is nothing that helps and I am more and more swallowed by MS.

CODES: *coping strategy: to put MS away; dependency; rebellion; powerlessness*

Table II. Two perspectives of people with multiple sclerosis

<i>Criteria for comparison</i>	MS will never have the upper hand (P4)	I want the consequences of MS to pass me by (P25)
Feelings about MS	Confident, realistic	Bitterness, powerless
Identity	Integration of illness	Loss of former identity
Coping strategies	Normalizing, managing	Hiding, banishing
Dealing with the family	Openness, support	Isolation, distraction
Dealing with help	Organizing, control	Rebellion, resistance

My wife is tired. I can see that and I almost feel guilty about that. But I get rebellious from that. Every time something should be done here in the house, it is she who has to do it. I have to ask everything and she always has to consider me. All that asking, she must do everything and I have to disturb her so often. And we dispute about that because she is not ill, I am ill. And I have to deal with all that. It is not only the physical complaints, but this illness involves many mental problems.

CODES: *family: disputes; relationship: burden; rebellion; guilt*

I talk as less as possible about my illness. Sometimes I do, but not every day. My wife wants me to talk more about it, but it does not solve anything.

CODES: *relationship: communication; coping strategy: to put MS away*

The comparison of both interviews made clear which problems MS caused and what the illness meant to the lives of the various participants in the study. Different perspectives of MS-patients were reconstructed of which two are displayed in Table II. The criteria on which the interviews are compared and grouped together are displayed left in the table. Patient 4 fits the perspective 'MS will never have the upper hand' and patient 25 fits the perspective 'I want the consequences to pass me by'. Of course more patients fit into each of these patterns.

In *step 3* of the constant comparative analysis interviews from two different groups are compared with regard to the experience of a specific phenomenon. In the MS study this took place by interviewing the spouses of the MS-patients. As an example we show two fragments of patient 4 (P4) and his spouse (S4) who talk about the same event. It is not necessarily a comparison between two partners, in fact all spouses can add information to the group of patients for the sake of triangulation. The important thing here is that by adding the spouses' information we got a deeper understanding of the patient's adaptation to illness and deterioration in the context of the adaptation process of the family as a whole.

Fragment of interview P4

I need a chair in the shower to take a bath. This chair had to be changed. And then a physiotherapist came to look at my situation and he said you don't get a chair, you need a stretcher. And I said no, I am not up to a stretcher yet. But my wife nodded in agreement. My wife sees my problems earlier than I do. I sit on that chair and I shake and my wife catches me and I don't even notice. I think that all ill people see themselves as better than their family members see them.

Fragment of interview S4

Yes, he did not want a stretcher in the shower. He thought that a chair would do. But a physiotherapist visited us and he said that a chair was not adequate and that my husband almost fell from it. Most of the times my husband is the one who accepts his deterioration earlier than I do. I have trouble with it. That was the case with the electric wheelchair. I didn't want him to have one because in my eyes he seemed so far gone back. While he experienced it as a liberation, because he could move outside the house on his own. I learnt from that event that I should not prevent him from using aids because they can solve his problems.

In *step 4* of the analysis process we want to compare in pairs at the level of the couple. For this comparison it need to be two partners who are compared. One of the relationship issues that appeared to be of importance was commitment to the relationship and shared future plans of partners. Again P4 and S4 talk about this issue and reveal the way they deal with this:

Fragment on Relationship Issue Commitment in Interview S4

You are married and you promised to share the good times and the bad times and I am behind that idea. If your husband is afflicted with MS I think that two things can happen: either you grow apart or you grow towards each other. And that happened to us, we speak the same language. Of course we do things together that no husband and wife do together. For example, I take him to the toilet. In a normal family the man goes out to work all day and comes home during the evening. We are together all day, we do everything together. But this doesn't mean that I don't have a hard time now and then. I find it very burdensome, because I always have to be there for him.

Fragment of Relationship Issue Commitment and Future Plans in Interview P4

In the daytime my wife and I have become a real twofoldness. We have grown towards each other. And that went so far, that my wife could not deal with it and became over strained. Then I went to an activity centre and my wife began

voluntary work. And because she is doing something else then, she can't be concerned about me at the same time. We both went to different places and now we got something to tell to each other when we come home.

Four themes challenged all couples, namely: communication and problem solving, reducing the influence of the illness, commitment and future plans and finally respect and appreciation. In *step 5* these themes functioned as criteria to compare the twenty couples. First we show one fragment from an interview with spouse 8 (S8), a male care-provider. From this fragment the difference with couple 4 becomes clear. Finally, we show a table that displays dimensions of the couples on the different criteria.

Fragment on Relationship Issue Commitment and Future Plans in Interview S8

We made a deliberate choice that my wife is going to live on her own in a special residence with professional help. More and more, we have grown apart and live a life of our own. At a certain moment I think it has no excess value to live together. She can't do a lot of things anymore, so you don't do many things together. She sleeps a lot. In our family the fun disappeared and I find that hard to accept. I have tried to prevent splitting up, but not against any price.

6. Summary and Discussion

The present findings demonstrate that during qualitative analysis there are many moments of comparison. The term 'constant' might be a slight exaggeration, but comparison is at the heart of the analysis process just as Glaser and Strauss pointed out in their discovery of and later elaborations on the grounded theory approach. The step by step approach to the constant comparative method (CCM) described here systematizes this method for analysing interview data. Going about CCM in a purposeful way and reporting the researchers' own experiences when implementing the step by step approach, increases both the traceability and credibility of researchers' analysis in their qualitative studies. The example reinforces the point that it is not necessary to compare everything with everything else, but that the comparisons must be conducted according to a sound plan. A plan implies that the researcher knows beforehand which comparative steps are needed in the analysis regarding the elements that are compared, the aims, the questions asked and the expected results of each step.

To answer the first research question, how varied the comparative moments are, it is found that the elements that are compared vary along different steps. When a study involves dyads, like our example about married couples, there are different data sources. This is reflected in the data that are used in the different comparative steps, namely: one interview, more interviews within the same group, interviews

Table III. Dimensions in dealing with relationship challenges by couples

Relationship challenges	Dimensions in dealing with challenges by couples
Communication and problem solving	Settling things together by talking about it
Respect and appreciation	Feelings of being competent in relationship roles, intimacy
Reducing influence of the illness	MS does not dominate the relationship or their lives
Commitment and future plans	Partners develop a shared perspective on their situation and future
	Attempts at communication end up in discord
	Feelings of incompetence in relationship roles, criticism
	Problems associated with the illness spill over into other areas
	Partners have different views on their future and see themselves go separate ways

from different groups, interviews that constitute a couple and interviews with different couples. These data sources can also be used in studies into other dyads, such as parent and child, siblings or employer and employee. Accordingly, there are less data resources available when the study involves only one group of people who undergo the same experience from the same perspective. Accordingly, there are even more data sources and more comparative moments when more perspectives are involved, for example triads. The available data dictate the number of steps.

To answer the second research question, which aims the different comparisons have, the aim and the results of the different steps differ much. Comparative thinking contributes to the development of criteria to distinguish categories of data, to the conceptualization of the field under study and to the patterning of the data that ultimately provides an answer to the research questions that are examined in a particular study. Therefore premature results are needed, such as codes, conceptual profiles, summaries, memos and provisional definitions which ultimately lead to the final results of the study.

The third and last research question was aimed at the relation between the different types of comparison. The coherence between the types has to do with their complexity. First of all, complexity is influenced by the *amount* of interviews involved in the comparison. In the first step only one interview is involved, while other steps encompass as many interviews as are available. Second, complexity is connected with the *diversity* of interviews involved. Step two is limited to interviews from one group of people who share the same experience, while from step three onwards, the interviews used involve people with different perspectives. Third, complexity is linked with the level of analysis. Steps one to three are on the individual level, while steps four and five are on the dyadic level.

It is important to notice that the steps do not form a linear process but can be found in all the research phases and support the cyclical method in qualitative research. Every time a new interview is conducted, the comparison within a single interview takes place and every time an interview with a partner completes a couple, the comparison in pairs and the comparison of different couples can be carried out. However, the simpler comparisons (step one within a single interview and step four in pairs respectively) were carried out more intensively at the beginning of the study and the more complicated steps which involve more and more diverse interviews (steps two and five) were extended in later phases.

Finally a word about creativity and theoretical sensitivity. The procedure for CCM described here focuses on comparisons between interviews conducted to answer research questions. External data that have not been produced for this specific purpose, such as films, books or photographs, are highly heterogeneous and therefore less likely to be influenced by the researcher. Excluding these sources from the step by step procedure does not mean that the information and knowledge they provide should be ignored. Instead we admit that these comparisons and occurrences have a very important part to play in research and especially in qualitative research. There is no procedure or prescription for identifying exactly

which comparisons are a fertile source for developing categories and a theoretical model. Making the right choices in this process depends on the creativity, experience, knowledge, talents, support and sensitivity of the researcher. In this respect, comparisons go hand-in-hand with interpretation and it is our opinion that purposeful comparison makes the valuable task of interpreting social phenomena a much easier proposition.

References

- Boeije, H. R., Bromberger, N., Duijnste, M. S. H., Grypdonck, M. H. F. & Pool, A. (1999). *In relatie tot MS. Zorgafhankelijke mensen met Multiple Sclerose en hun partners*. Utrecht: NIZW.
- Chenitz, W. C. & Swanson, J. M. (eds.) (1986). *From Practice to Grounded Theory: Qualitative Research in Nursing*. Menlo Park: Addison-Wesley.
- Denzin, N. K. & Lincoln, Y. S. (eds.) (1994). *Handbook of Qualitative Research*. Thousand Oaks: Sage.
- Dey, I. (1993). *Qualitative Data Analysis. A User Friendly Guide for Social Scientists*. London & New York: Routledge.
- Glaser, B. G. & Strauss, A. L. (1965). *Awareness of Dying*. Chicago: Aldine Publishers.
- Glaser, B. G. & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.
- Glaser, B. G. (1992). *Emergence vs. Forcing. Basics of Grounded Theory Analysis*. Mill Valley: Sociology Press.
- Kimchi, J., Polivka, B. & Stevenson, J. S. (1991). Triangulation. Operational definitions. *Nursing Research* 40: 120–123.
- Kuckartz, U. (1998). *WinMAX 97. Scientific Text Analysis for the Social Sciences*. Berlin.
- Layder, D. (1993). *New Strategies in Social Research. An Introduction and Guide*. Cambridge: Polity.
- Miles, M. B. & Huberman, A. M. (1984). *Qualitative Data Analysis: An Expanded Sourcebook*. Beverly Hills: Sage.
- Morse, J. M. & Field, P. A. (1998). *Nursing Research of Qualitative Approaches*. Cheltenham: Stanley Thomes.
- Schwandt, T. A. (1997). *Qualitative Inquiry. A Dictionary of Terms*. Thousand Oaks: Sage.
- Sivesind, K. H. (1999). Structured, qualitative comparison. *Quality and Quantity* 33: 361–380.
- Strauss, A. L. (1987). *Qualitative Analysis for Social Scientists*. Cambridge: Cambridge University Press.
- Strauss, A. & Corbin, J. (1998). *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. London: Sage.
- Tesch, R. (1990). *Qualitative Research. Analysis Types and Software*. London: Falmer press.
- Wester, F. (1995). *Strategieën voor kwalitatief onderzoek*. Muiderberg: Coutinho.

