3-1-2011

Utilizing a New Graphical Elicitation Technique to Collect Emotional Narratives Describing Disease Trajectories

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Abstract
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Keywords
Elicitation Technique, Emotions, Health Service Research, Semi-Structured Interviews, Patient Perspective, Narrative Methods, and Qualitative Research

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This book review is available in The Qualitative Report: http://nsuworks.nova.edu/tqr/vol16/iss2/19
Utilizing a New Graphical Elicitation Technique to Collect Emotional Narratives Describing Disease Trajectories

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Elicitation techniques in connection with semi-structured interviews are scantily used, but reported to be beneficial to research. We developed and tested a new visual technique to be utilized in the latter part of semi-structured interviews. It has proved to be feasible and beneficial to use, and it could possibly be used by others. This way of extending the interviews generates more data in a visual form, as well as in a verbal form, by supporting the participants in remembering nearly forgotten parts of their experiences and in expressing emotions associated with those significant experiences. As a contribution to qualitative research, our study showed that the visual data, created by the participants, also contributed to getting the elaborated narratives. Keywords: Elicitation Technique; Emotions; Health Service Research; Semi-Structured Interviews; Patient Perspective; Narrative Methods; Qualitative Research

In qualitative interviews it can be difficult for interviewers to get participants to explicate specific experiences (Johnson & Weller, 2002; Lindseth & Norberg, 2004; Miller & Happell, 2006), emotions (Johnson & Weller; Little, Jordens, Paul, Montgomery, & Philipson, 1998) and needs (Markus & Kitayama, 1991), and they may also have trouble remembering earlier experiences (Lindseth & Norberg). Knowledge from patients in these areas can be most useful in professionals’ efforts to develop proper care from the healthcare system. To help generate data, special elicitation techniques can be used. The aim of such techniques is in general “to uncover unarticulated informant knowledge . . . [and includes] asking questions in a standard way . . . [that have] an exploratory or emergent character in their attempts to reveal tacit subjective understandings in some cultural domain” (Johnson & Weller, pp. 491-492). If the technique is well-chosen and used, it can elicit tacit knowledge and thereby provide a significant advantage when used in conjunction with interviews, compared to an ordinary qualitative interview. Elicitation techniques are used in qualitative interviewing within a broad array of disciplines, for instance anthropology, sociology, psychology, economics, computer and political science (Johnson & Weller).

One form of elicitation techniques draws upon the participants’ visual sense. In this way it is possible to go beyond simply asking questions to elicit information (Johnson & Weller, 2002). A literature search in this area revealed several techniques used in relation to health issues. We searched words including interview, emotions, data collection, special technique, methodology. We searched back ten years in PubMed via Medline, CINAL via EBSCO, Psyk Info via Ovid and SweMed+ via The Institute of Karolinska, and got a total of 411 hits to review in abstracts. This review revealed 18
relevant papers. The techniques were used with both health care professionals (Henriksen & Hansen, 2005), and patients in social research (Guillemin, 2004a; Guillemin, 2004b) and mental health research (Clements, Faulkner, & Manno, 2003), but were understood as offering a “snapshot” understanding of patients’ experiences or imaginings or as providing clarification of concepts. Techniques include the use of drawings (Kearney & Hyle, 2004) or photographs (Miller & Happell, 2006) to generate talk within interviews. We were especially interested in experiences recalled over a time span, and found one study of particular interest, in which the interviewer used a technique to collect a sample of relevant events that occurred in the health care system (Bairati, Fillion, Meyer, Héry, & Larochelle, 2006). This technique was used in connection with semi-structured interviews with predetermined questions and consisted of offering a predetermined list of expected events in the health care system and letting the interviewer and participant construct a timeline of events of interest during the interview. We drew upon this example in developing a new graphical elicitation technique for use within a semi-structured interview. This new technique was designed to support the participants in including their emotions in narrations about their experiences of help from the healthcare system while receiving care during a specific trajectory of disease. The aim of this paper is to describe how the technique was adopted and how data were affected after we extended interviews with the new technique.

As a former nurse with skills in working with vulnerable patients, I (the first author) interviewed patients in the last part of an acute period of cancer. As nurses we are not always told about possible negative experiences from patients, and so no participant in this study was told my clinical background. Instead they knew I came from the University of Southern Denmark, that I was very interested in their experiences, and that what they told would be used to work on developing best practices for treatment of cancer patients in the future.

Methods

Before describing the elicitation technique, we will briefly describe the context in which it was developed. The technique was developed in the course of the first author’s Ph.D. study of female cancer patients’ experiences of help from the healthcare system. The authors were interested in participants of all ages and with all diagnoses of gynecological cancer. The inclusion criteria for the study included the participants’ ability to speak and understand Danish and an aroused suspicion on their part that they had cancer. In accordance with Danish regulations, the Danish Data Protection Agency was consulted and provided formal consent for the study to be conducted. The study adhered to the regulations: Ethical Guidelines for Nursing Research in the Nordic Countries (2003) and Declaration of Helsinki (2008).

The sample for the study was drawn from an outpatient clinic affiliated with a gynecological surgical unit at a university hospital in the Region of Southern Denmark. In a phone call, the day after the referral had reached the outpatient clinic, I (the first author) described the study to the patients, explained that they would receive anonymity if they participated, and assured them of the possibility at all times to withdraw from the project without any consequences related to the treatment and care given at the clinic. I also mailed this information to patients who were willing to participate. Around one week
later, at the outpatient clinic, I repeated this information and participants signed statements of informed consent.

The study sample consisted of eight women (age 36 – 78, mean 61.3) in a defined acute period of a trajectory of cancer. All participants were interviewed by the first author. I began the interviews using a semi-structured interview guide that included open-ended questions focusing on a) unmet needs, b) special important support, c) dispensable help, and d) wishes for the future, all in relation to the woman’s situation, the healthcare system and the events occurring here. During interviews, and especially afterwards, I felt participants wanted to tell me more, but were not able to find the words. I was interested in expansive narratives in this area, and thus developed an extra elicitation technique. When the participants seemed to have shared all that they had to say, I introduced the new elicitation technique.

**The new elicitation technique**

The rest of the interview was supported by both the semi-structured interview guide and the new technique as well. I asked the participant if she thought she could draw the emotional changes of her most salient emotion(s) over time on a grid. The grid was given to her as a preprint to show the structure of it (Figure 1). The y-axis had preprinted a relative (%) level to visually show the strength of an emotion. Here 0% was, for example, no anxiety or not glad at all, and 100% the most anxious experience or the experience of greatest happiness she could ever think of, depending on what emotion the patient had chosen to draw. The x-axis had preprinted the majority of events of a standardized gynecological cancer trajectory in the Region of Southern Denmark. I explained the structure of the grid to the participant, and the preprint was annotated, before she drew her emotions.

![Figure 1. The grid as it was brought to the interview](image-url)
The list of events at the x-axis on the grid was collaboratively annotated. We began with the preprinted events, but changed the lines of events with regard to how events for this particular participant had occurred. Half way on the x-axis, the surgery was indicated. Time between events differed, and the x-axis was used only to show the order of events for this participant, and not to show the correct time between events. If the participant did not talk of her own accord while she drew, after a little period of silence I asked the participant her thoughts about the emotion she was graphing. Furthermore, I asked what causes there might be for the increasing or decreasing parts of the graph as well as the turning points, if this was not mentioned. Moreover, I asked her what could have been done to change a high or low point on the graphical presentation. This interviewing could extend to after finishing the graph. With great attention to the importance of the participant feeling comfortable, I still managed the interview by means of the semi-structured interview guide. Thus the graphical reproduction of an emotion supported the latter part of the semi-structured interview.

Data analysis

The interviews were recorded and transcribed verbatim, where two dots ( . . ) indicate a pause longer than the pauses marked by a comma ( , ) or a full stop ( . ). The data analysis focused on the latter part of the interviews where the new elicitation technique was used, and the previous part of the interview was only used for comparison. I (the first author) read and re-read the interviews to grasp the meaning of what was said with regard to the new elicitation technique in an overall interpretation. In this way the analysis and interpretation started open minded, and would run in an abductive way. Field notes on participants’ reactions to the new elicitation technique, as well as comments on the technique after the recorder was turned off, were included as data to support the examination of how the participants adopted the technique. Building on this early interpretation, I performed a structural analysis including what was said and an interpretation of what was spoken about, in order to end up with themes. The structural analysis should validate an overall interpretation. Finally, the themes were compared with relevant literature in a discussion that led to a more comprehensive understanding. In this way the techniques used in the data analysis were inspired by Ricoeur’s (1979) interpretation theory.

Findings

The findings presented in this article are solely concentrating on the new elicitation technique, and not on the results of the cancer care study for which it was used. After the first two levels of analysis, I identified two key themes pertaining to the elicitation technique: “new data” and “acceptance of the technique.” The new data are shown from three different perspectives: (a) The visual product, (b) The verbal product, and (c) Visual and verbal mixture. When data are presented, three dots ( . . . ) indicate that words are omitted in order to clarify the participants’ expression of ideas.

New Data
By extending the interview with the visual elicitation technique we generated new data in several ways.

**The visual product: Completed graphs.**

All finished as a minimum one graph. As an example, figure 2 shows a reconstruction of the graph the participant L drew, in order to give an impression of the visual material.

![Graphical reproduction of participant L’s experienced fearfulness in the selected part of the trajectory of cancer](image)

Fig. 2. Graphical reproduction of participant L’s experienced fearfulness in the selected part of the trajectory of cancer

**The verbal product: Elaboration of narratives.**

Some participants responded easily to the invitation to share their thoughts and emotions, and talked a lot. Others lacked the skill in some ways or were more reluctant in this regard, and had from the start expressed vague hopes for help in participating. Even though the participants’ concentration was decreasing before the new technique was introduced, they all afterwards more or less elaborated on their narratives, including more about events experienced in the health care system, hereafter labeled “events.” We found three different types of elaborations.

*New information with regard to the same event.*
Extending interviews with the new elicitation technique allowed participants to give more concrete information about emotions and preferences with regard to the events talked about before the technique was introduced. It was often participants’ experiences of situations which had made a major impression on them but they had nearly forgotten, and which they were very happy now to remember to talk about. As an example, one participant spoke in the first part of the interview about her appointment at the outpatient clinic:

I was generally a bit scared…well, I thought the doctor was incredibly nice. . so when I had spoken to the doctor…then I had to say to myself… an operation can go wrong and everything else…it is not going to ruin the rest of my life, no matter how long it may be, and then I took it from there. (G)

In the same interview, after the technique was introduced, the participant drew a graph reproducing fear and insecurity. She then extended her narration with more significant elements including emotions and preferences with regard to the same event. The following shows the richness in the elaborations of the narratives:

When you are going to have surgery and all that, that’s where you peak (on a graph showing anxiety, nervousness, insecurity, fear)…they may accidentally damage something there and colostomy and everything else one might run into, the doctor couldn’t know anything about that beforehand. That I thought was unpleasant to think about…but…I wouldn’t have done without the information I got from the doctor in the outpatient clinic…that waiting room (used before the consultation), it is a very small room, and when I walked in there…I just looked at all those terribly sad people sitting there. The waiting room was almost full, really…if one is already a bit scared and a little upset…you almost have a fear of contact…and you sit very close to each other…and you sit opposite each other…who are you going to look at…are they very sick, are they a little sick, are they like me, I don’t really know what I am…it’s something like…you are so busy dealing with your own traumas or whatever it is, dread and fear and disaster…and you can’t really at that stage cope with so many others’, what shall I call it …grief and misery…Can the room be widened?…Can some of the chairs be turned around?…Wow, I am glad I remembered to tell you this. (G)

**Better connection between time, concrete events and emotions.**

More general statements in the narrations before use of the new technique were after the introduction found to be supplemented with specificity, which in turn increased the usefulness of data. It was now possible for the participant to tell more and thereby possible for the interviewer to better understand her experience. Before use of the technique a participant said: “I don’t know if the help I got before the in-hospital period could have been any better” (F). In the same interview, and after the technique was
added, she supplemented her narration with talk about emotions and preferences in relation to when the correct time was for information about the physician’s suspicion of cancer:

At the beginning I was very very angry they did not tell me about their suspicion of me having cancer…that they could keep this information for so long without letting me know…but afterwards, when I am now sitting here, I am very pleased they did because this information would only have ruined our holiday…I would have been left alone for many days without being able to contact anybody, and nothing happening, and you don’t know anything…everything is closed down. (F)

More events emerged between the events already talked about.

Some events were not on the annotated list from the start, as they were not mentioned by the participants. They were events with related experiences, which first appeared when graphical reproduction of emotions in relation to the row of events in the trajectory of disease was made. As an example, a participant told about the period from the time the gynecologist called to tell her she had cancer until the hospital took over. Before the introduction of the technique she said:

Cancer…It cannot be me. I have to think about this stuff…then it goes quite quickly, and well then I had to go to (the big hospital at the region)...when the gynecologist called and told me, that it is the final diagnosis...at that time I got quite frightened, in the sense…(S)

After the grid and request to draw was presented, she chose to reproduce fear and insecurity in a graph, and in the mentioned part of her narrative she included her general practitioner and emotions in this regard:

Well when (the gynecologist) called me…then we must go up here (on the graph), I am aware of that . . (Interviewer: so when he called you) I went up here, yes...but you know . . I quite quickly did have a talk with my general practitioner...and then he actually has a talk with (the gynecologist) too . . (Interviewer: yes) so he calmed me down quite a lot, really actually…I am less anxious when I get to (the outpatient clinic). (S)

Visual and verbal mixture: Intertwining of verbal and visual data.

With the introduction of the elicitation technique, the visual product and the verbal narrative were in some ways combined, where the visual work was now included in the verbal narrative.

I start over here. Now I shall simply make it as . . now I have to think…okay I remain a lot up here, there is no doubt, now we will see, this was the day, where we got the message...(F)
Acceptance of the Technique

All eight participants who were invited to draw a graph did so. Most of them met the request to draw without any particular comments, but at first a few stated “ohh, I can’t draw” (S) or “graphs are not my strongest point” (L). Still, all started to draw and talk within one minute, all showed eagerness using the technique, and by the end the task indicated comfort with the process. Two women even requested a preprint of the grid, to use by themselves in the future.

Graphic technique providing participants with control.

Looking at the interview situation, after the participant was invited to draw a graph they naturally had an increased awareness of what the interviewer was especially interested in about their narratives. Adding the new technique helped participants to have more control of the situation, which was also reflected in the verbal narratives. For example, an important area for the collecting of data was the relation between experienced emotions and events in the healthcare system. Questions in this regard were in many examples taken over by the paper and the grid:

Well . . . the clinic affiliated to the hospital ward…there was this girl…I think she was in chemotherapy…when I entered I was fine…(Interviewer: yes) but the more I sat looking at her…I imagined the worst…so there (indicating a point on the graph) I got scared…(J)

Moreover, the visual process offered help in the personal area:

It has not been hard talking to you…so it has been quite fine. Well yes. Actually it is fine to put something down here…I have thought of that, because I have mulled it over…in my head (L).

The participant indicates that there was a value to the visual work, in that it helped her to think again about the trajectory of disease, collect her thoughts, and communicate visually and verbally. In this way the visual work impacted the verbal narrative and gave the participants increased control in the interview situation.

Graphs as a reference point.

Many used the graphs to point at while narrating, or verbally included the graph. As an example a participant drew a graph of fear of cancer, and told about her experiences in relation to an event in the healthcare system:

I think I was not that high…I’ll remove this . . (Interviewer: you just take it away then) . . Yea…I did not know if I should have any treatment after surgery . . (Interviewer: no). But still, you think…(L)
In the latter part of the interview the graph in this way became a reference point for many participants.

**Discussion**

This article describes graphical reproduction of emotions as a new elicitation technique to be used in the creation and collection of data. We extended semi-structured interviews with the technique where participants were female patients with cancer in an acute period, and found the technique to be well accepted by participants and useful for data collection. We have explored how the technique was adopted, as well as how data were affected. After participants seemed to have narrated what they possible could (or would), we were able to extend interviews with the new elicitation technique. The analysis and interpretation so far has revealed that the technique was well accepted by the participants, and we obtained elaborated verbal data as well as a completed visual product. Moreover, the visual data intertwined with the verbally expressed narrative at several points in the interview, revealing that the visual work enhanced participants’ control in the interview situation, as well as showing a personal benefit in performing the visual work in conjunction with the verbal narrative. We argue that this intertwining supports a good interview process, and hence supports what Miller and Happell (2006) have brought forward. We argue further, that this subsequently could have supported the increase of data. The interviewer and participant to a degree affect each other. The participant has the story and can decide how much to share, and the interviewer has an agenda, and will try to get the story for instance by trying to create an empathic environment (Karnieli-Miller, Strier, & Pessach, 2009; Kvale & Brinkmann, 2009). A nonhierarchical atmosphere as well as motivations for entering the study are issues considered to have an impact on the relationship (Karnieli-Miller et al.). Moreover, a good conversation is considered to potentially increase the amount the participant wants to share (Kvale & Brinkmann).

A good conversation from the participants’ point of view could include benefit in an expected area, and in this regard all our participants at a minimum expressed expectations to benefit on a personal level, though in very different degrees. In this light, from a theoretical point of view, the participants experienced benefit as well as increased control, which partly redresses inequality between participant and interviewer in the interview situation. This is regarded to be an advantage that most likely has contributed to the elaborated verbal narratives as well as to the completion of the visual graph. In this way the visual work most likely supports the process of getting elaborated narratives.

Others have used visual techniques in data collection in connection with qualitative interviews, where they report on problems with regard to the feasibility. Guillemin asked patients to draw pictures of “how they visualized their condition” (Guillemin, 2004b, p. 276) after single interviews and found that not everybody was able to make a drawing. Kearney and Hyle asked participants with new changes at their workplace to draw a picture that “describes what this change has been like for you – your experience of the change…” (Kearney & Hyle, 2004, p. 364) before interviews, and found that no one was positive regarding the drawing, wondering if the participants’ feeling of safety in the interview could influence this finding. Our participants drew graphs in the latter part of the interviews. Not neglecting the power of feeling safe, we
suggest we have made the task easier than, for example, making drawings. With this technique we offered participants an opportunity to solve small specific tasks (description of events), and small abstract tasks (their emotions in this regard) to be solved in a visual and verbal manner. Furthermore, we introduced a time span the participants were familiar with. We suggest we introduced an overall frame of a well-known situation which asked for well-known low technical skills. In doing this, we made it easier for them to fulfill the visual part. Everybody in our study drew on a graph within minutes after the idea was presented, even with apparent eagerness, and only a few commented on the technique beforehand. They all finished the graph and talked in relation to it. In this way the technique was well accepted and feasible.

By adding the new technique to the interview, when participants seemed to have narrated what was possible, we got increased quality of verbally expressed data, which is in line with other research (Johnson & Weller, 2002; Kearney & Hyle, 2004; Miller & Happell, 2006; Osmond & Darlington, 2005), and indeed, we got different amounts of extras from the participants, like Kearney and Hyle did (Kearney & Hyle). They suggest that some people see the benefit in sharing their thoughts regarding feelings and emotions, which could remove the need for an elicitation technique. We argue it could be beneficial for research to include the new technique for all participants in special situations. All their participants were people at a workplace. Our participants were all expected to be affected by suspicion of, or newly diagnosed cancer, and all saw, or hoped for, a personal benefit in sharing thoughts, though at very different levels.

In general it can be difficult to remember earlier experiences (Lindseth & Norberg, 2004), and for all participants in our study, the extension of the interview with the new elicitation technique gave more verbally expressed experiences, including emotions or preferences in relation to events in the healthcare system. If the desired outcome is good quality narratives, including experienced emotions and/or preferences in relation to help in a time span, and whether participants are weakened in a trajectory of disease, the work at hand suggests that including the elicitation technique would be beneficial; this benefit seems to be evident whether or not the participants have strong skills in expressing emotions, or see the benefit in sharing their thoughts in this regard. All participants could elaborate on their narratives, subsequently offering deeper insights to the interviewer/researcher.

Since we introduced a grid and labeled the two variables, we also introduced a cognitive frame for what the participant did not have readily available in her mind. It was exactly the frame for our research interest, and what is outside this frame we to an extent have prevented ourselves from obtaining knowledge about. Many agree it can be difficult to get people to talk about specific areas in qualitative interviews (Johnson & Weller, 2002; Lindseth & Norberg, 2004; Little et al., 1998; Markus & Kitayama, 1991; Miller & Happell, 2006; Osmond & O’Connor, 2006), and among adult people some find a visual elicitation technique useful in this regard (Johnson & Weller; Kearney & Hyle, 2004; Miller & Happell; Osmond & Darlington, 2005), but a substantiated description on possible contributing causes to the positive findings is not found. Moreover, we judged the elicitation techniques found in the literature appropriate to “snapshot” understandings and to clarify concepts. The strength and uniqueness of the paper at hand are a) its new contribution to qualitative methods to enhance emotional expressions in narratives.
regarding a trajectory of disease, and b) its attention to possible contributing factors influencing the increased quality of data.

Visual techniques are only used to a limited extent, which is also found by others (Miller & Happell, 2006). This could possibly be caused by lack of knowledge. In this regard we lack studies examining visual techniques’ possible connection to increased quality of data. While the visual elicitation technique described in this paper was developed specifically for the research at hand, it is important to note that it could be used by others in the context of other qualitative studies.

Acknowledgement

We gratefully acknowledge financial support from the University Hospital in Odense, the University of Southern Denmark and the Novo Nordic Foundation, Denmark. Moreover, we would like to thank the participants in this study.

References


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Article Citation