
Article

Focus Groups in a Medicine-Dominated Field: Compromises or Quality Improvements?

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Abstract

Mammography screening has traditionally been viewed as a field for medical research. The medical science discourse, however, is highly quantitative, and its claims for validity somewhat opposed to those of qualitative research. To communicate research in a cross-disciplinary field, it is necessary to adapt one's research to several paradigms. The authors conducted focus group interviews with women due to be screened in a national breast cancer screening program. Their prospective design, both strategic and random sampling, and free discussions during focus groups are all questions of satisfying a medical science discourse in the frames of qualitative research. Focus group research showed itself adaptable through the data collection phase in a cross-disciplinary research project on mammography screening.

Keywords: focus groups, qualitative methodology, mammography, screening, multidisciplinary research

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In this article we present reflections on our experiences regarding the role, design, and effectiveness of a qualitative research project on mammography screening. In Norway, as in the world at large, mammography and screening have traditionally been seen as located within the medical field. Although qualitative research in medicine is far from a new invention, the medical discourse is dominated by a quantitative, evidence-based logic (Grypdonck, 2006). Clinical and epidemiological studies have dominated research on mammography screening. These have focused mainly on the core issues for policy, namely the safety and effectiveness of mammography screening (Gotzsche & Olsen, 2000; Nystrom, Andersson, et al., 2002; Nystrom, Rutqvist et al., 1993). Throughout these discussions arguments are focused primarily on numbers and survival estimates. Other issues addressed have been treatment options in connection with screening; psychological research, which has also to some extent been included through research on anxiety levels for participants (Brodersen, Thorsen, & Cockburn, 2004; Brunton, Jordan, & Campbell, 2005); and how information about medical screening should be given to secure participation in the screening programs (Ahmad, Cameron, & Stewart, 2005). These kinds of research can be seen as playing a supporting role in a field where medical expertise has had the leading role in decision making, execution, and research, even though recent decades have seen a rising consciousness of patient or lay rights in what traditionally have been seen as medical questions (Lerner, 2001).

A question is how medical dominance of the discourse affects how and why research on subjects is carried out. One might also ask what the pursuit of other research questions and methods might give to the dominant medical discourse. Even though quantitative, evidence-based research gives important information on biomedical issues (Hetlevik, 2004), it has clear limitations when it comes to producing knowledge about, for instance, patient experiences or lay perspectives on health issues.

A screening program for breast cancer had been initiated in Norway in 1996 and was becoming nationwide during 2003, when we conducted our study. We knew of only one study of women's experiences as participators in the program (Hofvind, Wang, & Thoresen, 2003). Hofvind's study was survey based and quantitative, and our multidisciplinary research group chose to carry out focus group interviews to explore women's experiences and lay perspectives on mammography screening. Because of the strong dominance of numerical arguments on the field of screening, we opted to provide "new" knowledge to both medical professionals and policy makers. Despite several studies using focus groups on health issues (Bender & Ewbank, 1994; Waldorff, Bulow, Malterud, & Waldemar, 2001), including studies of mammography (Pfeffer, 2004b; Willis, 2004), throughout the project we were frequently faced with critical questions concerning the qualitative nature of the research. This led us to ask how our qualitative research might be secured and what impact it might have in a field where quantitative studies are the norm.

Communication problems between paradigms

Different research methods have somewhat different theoretical bases and different views on what it makes sense to study. There is not one standard approach to qualitative research, but one might claim that a constructivist approach dominates, just as there is not one standard approach in medical research, although a natural science ontology dominates (Silverman, 1993). The main features of qualitative research might be said to be that it involves examining social phenomena in their natural environment, attending to commonsense assumptions about what constitutes a field, and doing theoretically driven research rather than research driven by technical considerations (Silverman, 1993).

One assumption that qualitative methods share is an acknowledgement of the role of the researcher in both creating and analyzing the data. Although there are different approaches to researcher presence in qualitative research, there is a certain acknowledgement of the researcher as the analytic interpreter of the material (Gubrium & Holstein, 1997). This has led critics of qualitative research to point to what they see as the lack of objectivity in data materials and analyses. For instance, Weinberger et al. (1998) have discussed the reliability and generalizability of interpretations of focus group material. One response to this is that qualitative data can be said to take better care of objectivity when studying “objects” existing in a context of language and social relations than methods developed to study nonhuman spheres, such as the methods of the natural sciences (Kvale, 1996).

One aspect of medical discourses is the use of numbers such as statistics in medical arguments, with emphasis on evidence-based medicine and randomized controlled trials (Hetlevik, 2004; Makela, 2004). In a Swedish study physicians were shown to evaluate quantitative and qualitative research differently (Johansson, Risberg, & Hamberg, 2003). Quantitative abstracts were acknowledged for their scientific accuracy, whereas qualitative abstracts were seen as less scientific and accurate but nonetheless clinically relevant. This can give us a notion of how medical professionals think about science and its status. Nevertheless, qualitative research is not unknown in medical journals. Both *The Lancet* and *BMJ—British Medical Journal* have published papers on qualitative research methods during the last decennials (Malterud, 2001; Mays & Pope, 1996). Still, without pushing too far, we will claim that medical science discourse is primarily quantitative and oriented toward naturalism and realism.

Even within this general orientation, however, different medical specialties have different approaches to quantification of data. Different orientations can be exemplified by looking at how tools to deal with breast cancer risk have been met with uneven acknowledgement by different medical groups. Breast self-examinations, “breast awareness,” and public mammography screening all have their supporters in different strata of the medical profession, where epidemiology and radiology are most in favor of mammography (Pfeffer, 2004a). One reason for support from epidemiologists is that mammography can be seen as innovative among screening programs for having been evaluated by means of randomized trials to estimate the potential for reducing breast cancer mortality (Morabia & Zhang, 2004).

Epidemiology is based on the use of large amounts of quantitative data materials (Rothman & Greenland, 1998). Epidemiological evaluations of randomized controlled trials have been one of the main sources of arguments in medical science discourses both in favor of and against organized screening. Randomized controlled trials have been seen to generate facts, as opposed to nonscientific or “emotional” arguments (Lerner, 2001). Nevertheless, when clinical and epidemiological arguments are in confrontation, clinical research tends to “trump” epidemiology, but in material on mammography screening it was difficult to test splits between epidemiologists and clinically oriented authors, perhaps because both directions have reached the same conclusions in this case (Sætnan, 1992).

Our choice to use qualitative methods to study lay perspectives on mammography screening was based on the fact that it had not been much studied, so there were no clear hypotheses to be “tested.” Rather, we wished to gather whatever meanings were out there, with only loose reins on the discussions. Quantitative methods presume that one knows in advance the relevant categories and that these can be measured accurately. We wanted to open up space for unknown categories of lay participant experiences and consequently chose to do qualitative research by using focus groups.

Nevertheless, even when exploring a new field, it is the researcher who formulates the questions for the interview. He or she is thereby setting an agenda and at least in part deciding the kind of knowledge that is relevant for the research question. One strength of the qualitative interview is still that the researcher may alter the design or add questions to the interview guide when knowledge of new issues is developed. The interview participants can also challenge the assumptions underlying a question, thus changing the direction of an interview. The possibility of altering questions according to responses among interviewees has been questioned by quantitative researchers asking how one can generalize from such data. Trying to communicate with research participants and other scientists in a way that made sense, we experienced ourselves as in “a squeeze” between different discourses. In the following we discuss some paradoxes that emerged during our study.

Our study

During 2003 we conducted a set of focus groups to study how women invited to a mammography screening program interpret screening and breast cancer. Focus groups were chosen primarily because we wanted to get in touch with how women experience being part of a screening program for a potentially fatal disease and hear how they talked about their experiences while among their peers. The study focused on women’s conceptions of mammography screening, breast cancer, and risk; on trust and technology; and on being cared for or being frightened. Our findings will be reported elsewhere (Solbjør, in press).

The design of the study was prospective. We followed eight groups of women through their experiences of a screening, from invitation, through examination, to results and reflection. We did this by interviewing the groups at three points: before, shortly after, and 6 months after their mammography screening examination. Referring to previous experiences, we assumed that eight groups would be enough to reach data saturation. Selections from each of the four municipalities were split in two age groups: 50 to 59 and 60 to 69 years. Municipalities were selected to represent an urban-rural dimension, although we chose only communities that had population densities that made it likely that we could gather enough women for group interviews without them having to drive for hours to meet. Each group had 6 to 10 participants, with a total of 69 women participating in the study.

The group sessions were structured by an interview guide. The interview guide consisted of five questions, some repeated and some specific to the three respective sessions with each group. The questions were copied and presented, one at a time, to the participants. A moderator read the questions and kept control of the discussion so that it stayed within the research themes. Aside from this, the women were encouraged to speak freely and ask each other questions rather than asking the researchers. This will be discussed more thoroughly later in this article.

The prospective design

Our prospective design acknowledges the possibility of changing constructions over time. New experiences can change the way we feel and talk about our opinions and attitudes. It was therefore our goal to catch the women’s experiences of and opinions on mammography screening both before and after they had participated in the screening program. This choice was based on two influences. In the literature on psychological distress related to mammography screening, it is common to apply psychometric measures at various times in relation to the screening to measure the psychological effects of the screening (Brett, Bankhead, Henderson, Watson, & Austoker, 2005; Brodersen et al., 2004). The other influence was prior experiences with studying screening

experiences with retrospective interviews. Such a design would also give interesting and valuable data, but they represented the participants' reconstruction of their screening experiences rather than their constructions at the time of the screening.

For instance, during the first focus group interviews we found that women expressed uncertainty about how they would experience the mammography examination and what consequences it could have for them:

First group session

Interviewer: What are your expectations to the examination?

G: I hope they don't find a lump . . . because yesterday I had a lot of lumps . . .

E: Did you check [your breasts]?

G: Yes, it [the invitation letter] said I should. "Tick this box if . . ." Found some lumps yesterday, but today it was gone. Thank God.

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E: But about something else . . . I haven't been there, so I don't even know how it is done. So it is a question I would like to ask those who have been there before. Well, is it as . . . bad . . . like . . . It isn't that it is dangerous, I can take pain, right? But, is it good to be squeezed like that? So hard as they tell you it is?

G: It has been discussed. I saw a program about it on the television about this research that's been done in Denmark. And it wasn't good.

The experience of uncertainty was more or less marginalized during the second round of interviews. At that time women were more concerned about their experience of the particular examination and the work of those in charge of the program as well as about having the answer. The woman concerned about her potential lumps and participating in the discussion of negative consequences from mammography during the first focus group session seems to be little concerned when interviewed after the mammography examination:

Second group session

G: I thought it was all right . . . I hadn't expected any information either, so . . . not much more than about having the result in about four weeks. We don't need any other information, I can't see that. And about being called again [in 2 years' time]. . . . So I can't see what other information we should have had either. If we should have had any more.

Having women talk about their experiences with mammography screening at two different times during the experience gave somewhat different results. It is impossible to claim that one of these interviews gives the correct picture of women's experiences over the other. Our choice, therefore, addresses the validity of the data. Both constructions and reconstructions of one's life experiences should be seen as representing valid data, but they should also be seen as representing different phenomena. We wanted to study women's experiences as they developed in the context of medical screening and thus opted for a prospective design.

In medical research prospective designs are preferred over retrospective ones, as they are seen as superior with respect to both to validity and reliability. Our design might, hence, have a greater appeal to medical researchers than some other qualitative designs would, as it can be seen as created on a common ground, although from quite different epistemic perspectives. Nevertheless, one can ask whether the prospective design actually obtains greater validity or reliability than a retrospective study would have done. Is the assumption that women's notions of mammography

can be grasped before they are influenced by an intervention like a screening program also acknowledging data as naturally given, as something that can be found in its natural state? We, rather, chose to see data as a changeable construction. This can be solved as a practical problem while collecting data, but it is important to discuss and be clear about one's perspective when doing analyses, not least when communicating results to different parties. We will look into this in more detail in the discussion.

Sampling and recruitment

As mentioned above, we chose to recruit focus group participants using both strategic and random sampling. Choosing a sampling process that gave credibility in both qualitative and medical discourses seemed like a good choice and has given us data material that can be communicated to several parties.

When we were inviting women to participate in the project, our purpose was to inform them about our intentions and the nature of the project so that they could make an informed choice as to whether to participate. An invitation letter was sent to women due to be screened for breast cancer. In it we gave a brief introduction to the project and a short description of how the focus groups would be carried out. We also made it clear that this was a cooperative project between our university and the Norwegian Cancer Registry.

Women wanting to participate returned a signed statement of consent to us and were later called to be reminded of the time and place of the focus group interview. During the phone conversation they were invited to ask questions. Despite our efforts to give sufficient information, we experienced that some of the women were unsure about the purpose of the project at the beginning of the focus groups. Some women understood it as being part of the breast examination, and some expressed that they participated because they wanted to contribute to medical research on breast cancer or as an act of solidarity with women who had breast cancer. This made us ask how our research project could be interpreted as having a strictly medical benefit and how these preconceptions might have influenced the data.

One answer to the first question is that we informed potential participants that our project was accepted by the Regional Committee for Medical Research Ethics, which initially locates the project in a medical context. Another potential answer is that lay perspectives on mammography screening are influenced by medical discourses, leading women to assume that all research in the field of breast cancer is rooted in medical science. This might have influenced how women talked and what they saw as important to report to researchers. A further question is whether it is possible to inform participants properly about how data will be used and interpreted (Bosk, 2001). Even though we informed the participating women of the purpose of the project, we cannot expect them to see the potential interpretations that will occur. After all, as researchers we discover new interpretations as we write up our results. This merely reflects that information will always be interpreted within a context.

Researcher participation and participator communication

The focus groups were conducted as discussions but still following an interview guide with preset questions. Questions were put forward in a standardized manner and in a set order. Each question led to a group discussion where the participants spoke freely about the issue in question. In this manner a focus group can be said to be both an interview and a discussion group.

As mentioned earlier, groups were directed by a moderator, who kept the discussion on topic by asking questions, inviting silent participants to join the discussion, and asking women to elaborate on their statements. Still, the main strategy at each group was to let the women discuss in their own ways so that we could hear their stories and perspectives. We chose to inform them that we (as researchers) would participate as little as possible during the discussion and that they were welcome to speak freely.

Many women addressed the researchers with questions, especially during the first group session, as we can see in the example below:

S: I thought it was very good to have the invitation [to the examination], that is, it is like a push . . . I am trying to examine myself sometimes but . . . it's never on a regular basis, it's like now and then. Ought to do it more regularly . . . Don't know how often? Once a month or what? Can someone answer that? (*S* is turning towards the interviewer)

Interviewer (looking at the group): Anybody know? Anybody have thoughts about this?

A: I got this advice at the GP's once.

The group moderator turned the question toward the other participants in the group, and the discussion developed further through the other women's advice and knowledge. One choice that we made was to refuse to answer questions from the participants until the set of three focus group sessions was completed. After the last session the women were given information about mammography screening and breast cancer based on the questions they had brought forward during the focus groups.

It is interesting to ask about the influence that a decision such as not answering questions might have on the group discussion and, furthermore, on the data we obtained. It is a paradox that although we were trying to obtain a normalized conversation between the focus group participants, as researchers we did not act in a manner normal to conversation in a group. In an ordinary group of people it would probably be considered impolite to refuse to answer a direct question. By choosing to observe more than participate in the conversation, we probably put ourselves at a distance from the participants, influencing how the women talked to us and to each other.

Participants were a bit reserved at the beginning of the focus groups. Eventually they spoke more freely as the first session progressed and even more freely during the second and third group sessions. Sometimes discussions wandered away from the issues put forward by the moderator, and she had to turn the conversation back on track. At other times they brought up themes that the researchers did not cover in their interview guide, such as issues related to family structures and "descending from healthy people" as well as the use of alternative medicine and their relations to general practitioners while living in a small community. All of these subjects were brought forward in connection to women's experiences of participating in mammography screening and could hardly have been anticipated by a researcher.

This shows how focus groups are discussions to which the participants bring their knowledge, experiences, and attitudes but where these presumptions are stirred together with those of the other participants' stories and opinions, thereby creating data from discourses and negotiations. Information lost in this process includes thoughts that are considered unsuitable in a group setting but that might have been revealed in a personal interview. The idea of focus groups as a construction site for data is therefore an argument for the researchers' staying out of the discussion.

On the other hand, one can see the choice to interfere as little as possible as a question of data biases. The idea of the researcher's role as involving as little interference as possible to avoid bias is relevant in the more quantitative medical discourse. Another choice that was made early on was to omit the two most experienced focus group moderators in the research team from these groups. We saw the mere presence of a male moderator to be an unfortunate intervention considering the subject in question, no matter how the role was played. Having a doctor as moderator might also influence how focus group participants act during the discussion (Reventlow & Tulinius, 2005). Again, this choice can be defended from two points of view. From a natural science standpoint, using moderators less likely to evoke specific notions as to the topic of discussion can be seen as restraint from intervention. However, we did see that having two young women as moderators had some effects on conversations: The participants often took a motherly, instructive, or protective tone toward the moderators, a form of bias but a data-productive one. From a constructivist standpoint, our choice of moderators could be viewed as avoiding putting constraints on participants' data-building conversations. From that standpoint, too, the choice can also be critiqued: What interesting exchanges, shifts of focus, and elisions might we have seen by inserting a man or a physician into the setting?

Discussion

Our research group aimed to perform multidisciplinary research acceptable and valid in both medical and qualitative fields of science. Using focus groups to find out how women experience participating in a screening program for breast cancer means accepting certain scientific perspectives. The choices we made were influenced by both medical discourses and our qualitative approach, and have presumably influenced the data material. Wilkinson (1999) has pointed to the loss of epistemological clarity when interpreting focus group data. For us it has been a challenge to stay true to the philosophical ideas of qualitative research while opting for communication of our results to several parties participating in the field of mammography screening. In the end, our project design became something of a compromise, with elements that can be interpreted in both realist and constructivist terms. One can ask why it is necessary to approach two methods with different, perhaps even contrasting, theoretical bases. We wished to communicate results so that they could be seen as scientifically valid and relevant to all parties in the multifaceted field of mammography screening.

It is relevant to ask whether it is possible to satisfy different epistemologies at the same time. The answer to this question is not a simple one and can be discussed on many levels. Others have seen data from focus groups as open to both essentialist and constructionist interpretations (Wilkinson 1999). We chose to approach the question in a practical manner; finding our way and testing possibilities in both directions while doing our research project. Our main choices have been presented in the previous sections of this article, and we will now discuss further the applicability of our approach to a multidisciplinary research field.

In an attempt to make our research communicable to others, sampling and recruitment of focus group participants had to be done according to the claims for validity in different scientific traditions. Our strategic grouping by age and an urban/rural community dimension could be seen as a tool for producing variation, in keeping with a qualitative tradition, or as a tool for testing specific hypotheses, for example about the effects of age and closeness to "nature" as influences on health attitudes.

Where the most widely accepted medical perspective might be to avoid bias and variation in the data material, qualitative theories acknowledge the idea of methods as practice, craftsmanship that is shaped and recreated during the situation. How, then, can we manage to maintain validity

and reliability for both qualitative and medical researchers? Perhaps the answer is that it is impossible to satisfy strict methodologies—the one way or the other—and that validity and reliability can be treated as more open concepts. For instance, validity is not destroyed by this variation in approach to the object under study. Rather, the multiple experiences and attitudes that women present during a focus group session are valuable to the research field of mammography screening. Nevertheless, researcher presence will probably always be a bias, and data's reliability can never be guaranteed when the researcher behaves differently in each unique situation. Rather, one could ask about the concept of reliability's relevance for a qualitative study. This challenge seems inescapable when one is presenting qualitative research to an audience favoring natural science epistemologies.

Our prospective design can also give room for more than one scientific perspective. It can be seen as showing how the experience of mammography screening becomes an element in the construction of the meanings of cancer and health. It can also be seen as isolating the invitation, the examination, and the results letter as separate factors influencing opinions.

An obvious question, then, is how this might have influenced our data and analysis. Is it possible to analyze data at the same time both as constructions of meaning among those studied and as determined by interventions from the outside? Our choice when interpreting the data has been to see the data as a process whereby women's interpretations and constructions of meaning are influenced by the intervention; that is, the screening invitation, examination, and results letter. However, instead of looking at the data as isolated before and after the screening intervention, we chose to focus on how women use the invitation and the screening program as part of their ongoing, dynamic constructions of meaning about, for instance, cancer and health.

Whether our analyses will be accepted by either constructivist social scientists or realist natural scientists remains to be seen. It might be that in trying to obtain data on common grounds for both constructivists and naturalists, we have rendered it impossible for either to accept our study's reliability or, even more, its validity. Maintaining validity from two perspectives, namely the medical and the qualitative, seems possible with minor adjustments in both directions. Although this looks like a good hybrid between qualitative and medical research, one can ask whether it, rather, turned out as a bastard.

Conclusion

Mammography screening is entangled in medical discourses. Focus group research is based on theories of science that are partly opposed to the quantitative, or positivistic, medical discourse. Our research stands in the middle of a cross-disciplinary field, and our methodological and analytical choices reflect how qualitative research on mammography screening is in a squeeze between theories of qualitative research and medical discourses. The design of a study, sampling procedures, and researcher presence during data collection have different implications depending on the epistemological perspective of the researcher. It is therefore necessary to find a way to communicate to several discourses at once without rejecting one's own perspective. Focus groups can be seen as a solution to a desire to do qualitative research in a field dominated by medical discourse. As we have shown, the process of focus groups and analyses of the data can be interpreted from a qualitative, constructivist point of view as well as from a more naturalist, or objectivist, perspective. Nevertheless, when we are analyzing data, the question of data perspective always remains. This makes focus group data valuable in a field of complex knowledge such as mammography screening.

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