

## RESEARCH PRIMER

# Qualitative Research: Getting Started

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## INTRODUCTION

As scientifically trained clinicians, pharmacists may be more familiar and comfortable with the concept of quantitative rather than qualitative research. Quantitative research can be defined as “the means for testing objective theories by examining the relationship among variables which in turn can be measured so that numbered data can be analyzed using statistical procedures”.<sup>1</sup> Pharmacists may have used such methods to carry out audits or surveys within their own practice settings; if so, they may have had a sense of “something missing” from their data. What is missing from quantitative research methods is the voice of the participant. In a quantitative study, large amounts of data can be collected about the number of people who hold certain attitudes toward their health and health care, but what qualitative study tells us is why people have thoughts and feelings that might affect the way they respond to that care and how it is given (in this way, qualitative and quantitative data are frequently complementary). Possibly the most important point about qualitative research is that its practitioners do not seek to generalize their findings to a wider population. Rather, they attempt to find examples of behaviour, to clarify the thoughts and feelings of study participants, and to interpret participants’ experiences of the phenomena of interest, in order to find explanations for human behaviour in a given context.

## WHAT IS QUALITATIVE RESEARCH?

Much of the work of clinicians (including pharmacists) takes place within a social, clinical, or interpersonal context where statistical procedures and numeric data may be insufficient to capture how patients and health care professionals feel about patients’ care. Qualitative research involves asking participants about their experiences of things that happen in their lives. It enables researchers to obtain insights into what it feels like to be another person and to understand the world as another experiences it.

Qualitative research was historically employed in fields such as sociology, history, and anthropology.<sup>2</sup> Miles and Huberman<sup>2</sup> said that qualitative data “are a source of well-grounded, rich

descriptions and explanations of processes in identifiable local contexts. With qualitative data one can preserve chronological flow, see precisely which events lead to which consequences, and derive fruitful explanations.” Qualitative methods are concerned with how human behaviour can be explained, within the framework of the social structures in which that behaviour takes place.<sup>3</sup> So, in the context of health care, and hospital pharmacy in particular, researchers can, for example, explore how patients feel about their care, about their medicines, or indeed about “being a patient”.

## THE IMPORTANCE OF METHODOLOGY

Smith<sup>4</sup> has described methodology as the “explanation of the approach, methods and procedures with some justification for their selection.” It is essential that researchers have robust theories that underpin the way they conduct their research—this is called “methodology”. It is also important for researchers to have a thorough understanding of various methodologies, to ensure alignment between their own positionality (i.e., bias or stance), research questions, and objectives. Clinicians may express reservations about the value or impact of qualitative research, given their perceptions that it is inherently subjective or biased, that it does not seek to be reproducible across different contexts, and that it does not produce generalizable findings. Other clinicians may express nervousness or hesitation about using qualitative methods, claiming that their previous “scientific” training and experience have not prepared them for the ambiguity and interpretative nature of qualitative data analysis. In both cases, these clinicians are depriving themselves of opportunities to understand complex or ambiguous situations, phenomena, or processes in a different way.

Qualitative researchers generally begin their work by recognizing that the position (or world view) of the researcher exerts an enormous influence on the entire research enterprise. Whether explicitly understood and acknowledged or not, this world view shapes the way in which research questions are raised and framed, methods selected, data collected and analyzed, and results reported.<sup>5</sup> A broad range of different methods and methodologies

are available within the qualitative tradition, and no single review paper can adequately capture the depth and nuance of these diverse options. Here, given space constraints, we highlight certain options for illustrative purposes only, emphasizing that they are only a sample of what may be available to you as a prospective qualitative researcher. We encourage you to continue your own study of this area to identify methods and methodologies suitable to your questions and needs, beyond those highlighted here.

The following are some of the methodologies commonly used in qualitative research:

- Ethnography generally involves researchers directly observing participants in their natural environments over time. A key feature of ethnography is the fact that natural settings, unadapted for the researchers' interests, are used. In ethnography, the natural setting or environment is as important as the participants, and such methods have the advantage of explicitly acknowledging that, in the real world, environmental constraints and context influence behaviours and outcomes.<sup>6</sup> An example of ethnographic research in pharmacy might involve observations to determine how pharmacists integrate into family health teams. Such a study would also include collection of documents about participants' lives from the participants themselves and field notes from the researcher.<sup>7</sup>
- Grounded theory, first described by Glaser and Strauss in 1967,<sup>8</sup> is a framework for qualitative research that suggests that theory must derive from data, unlike other forms of research, which suggest that data should be used to test theory. Grounded theory may be particularly valuable when little or nothing is known or understood about a problem, situation, or context, and any attempt to start with a hypothesis or theory would be conjecture at best.<sup>9</sup> An example of the use of grounded theory in hospital pharmacy might be to determine potential roles for pharmacists in a new or underserved clinical area. As with other qualitative methodologies, grounded theory provides researchers with a process that can be followed to facilitate the conduct of such research. As an example, Thurston and others<sup>10</sup> used constructivist grounded theory to explore the availability of arthritis care among indigenous people of Canada and were able to identify a number of influences on health care for this population.
- Phenomenology attempts to understand problems, ideas, and situations from the perspective of common understanding and experience rather than differences.<sup>10</sup> Phenomenology is about understanding how human beings experience their world. It gives researchers a powerful tool with which to understand subjective experience. In other words, 2 people may have the same diagnosis, with the same treatment prescribed, but the ways in which they experience that diagnosis and treatment will be different, even though they may have

some experiences in common. Phenomenology helps researchers to explore those experiences, thoughts, and feelings and helps to elicit the meaning underlying how people behave. As an example, Hancock and others<sup>11</sup> used a phenomenological approach to explore health care professionals' views of the diagnosis and management of heart failure since publication of an earlier study in 2003. Their findings revealed that barriers to effective treatment for heart failure had not changed in 10 years and provided a new understanding of why this was the case.

## ROLE OF THE RESEARCHER

For any researcher, the starting point for research must be articulation of his or her research world view. This core feature of qualitative work is increasingly seen in quantitative research too: the explicit acknowledgement of one's position, biases, and assumptions, so that readers can better understand the particular researcher. Reflexivity describes the processes whereby the act of engaging in research actually affects the process being studied, calling into question the notion of "detached objectivity". Here, the researcher's own subjectivity is as critical to the research process and output as any other variable. Applications of reflexivity may include participant-observer research, where the researcher is actually one of the participants in the process or situation being researched and must then examine it from these divergent perspectives.<sup>12</sup> Some researchers believe that objectivity is a myth and that attempts at impartiality will fail because human beings who happen to be researchers cannot isolate their own backgrounds and interests from the conduct of a study.<sup>5</sup> Rather than aspire to an unachievable goal of "objectivity", it is better to simply be honest and transparent about one's own subjectivities, allowing readers to draw their own conclusions about the interpretations that are presented through the research itself. For new (and experienced) qualitative researchers, an important first step is to step back and articulate your own underlying biases and assumptions. The following questions can help to begin this reflection process:

- *Why am I interested in this topic?* To answer this question, try to identify what is driving your enthusiasm, energy, and interest in researching this subject.
- *What do I really think the answer is?* Asking this question helps to identify any biases you may have through honest reflection on what you expect to find. You can then "bracket" those assumptions to enable the participants' voices to be heard.
- *What am I getting out of this?* In many cases, pressures to publish or "do" research make research nothing more than an employment requirement. How does this affect your interest in the question or its outcomes, or the depth to which you are willing to go to find information?

- *What do others in my professional community think of this work—and of me?* As a researcher, you will not be operating in a vacuum; you will be part of a complex social and interpersonal world. These external influences will shape your views and expectations of yourself and your work. Acknowledging this influence and its potential effects on personal behaviour will facilitate greater self-scrutiny throughout the research process.

## FROM FRAMEWORKS TO METHODS

Qualitative research methodology is not a single method, but instead offers a variety of different choices to researchers, according to specific parameters of topic, research question, participants, and settings. The method is the way you carry out your research within the paradigm of quantitative or qualitative research.

Qualitative research is concerned with participants' own experiences of a life event, and the aim is to interpret what participants have said in order to explain why they have said it. Thus, methods should be chosen that enable participants to express themselves openly and without constraint. The framework selected by the researcher to conduct the research may direct the project toward specific methods. From among the numerous methods used by qualitative researchers, we outline below the three most frequently encountered.

## DATA COLLECTION

### Interviews

Patton<sup>12</sup> has described an interview as “open-ended questions and probes yielding in-depth responses about people's experiences, perceptions, opinions, feelings, and knowledge. Data consists of verbatim quotations and sufficient content/context to be interpretable”. Researchers may use a structured or unstructured interview approach. Structured interviews rely upon a pre-determined list of questions framed algorithmically to guide the interviewer. This approach resists improvisation and following up on hunches, but has the advantage of facilitating consistency between participants. In contrast, unstructured or semistructured interviews may begin with some defined questions, but the interviewer has considerable latitude to adapt questions to the specific direction of responses, in an effort to allow for more intuitive and natural conversations between researchers and participants. Generally, you should continue to interview additional participants until you have saturated your field of interest, i.e., until you are not hearing anything new. The number of participants is therefore dependent on the richness of the data, though Miles and Huberman<sup>2</sup> suggested that more than 15 cases can make analysis complicated and “unwieldy”.

### Focus Groups

Patton<sup>12</sup> has described the focus group as a primary means of collecting qualitative data. In essence, focus groups are unstructured interviews with multiple participants, which allow participants and a facilitator to interact freely with one another and to build on ideas and conversation. This method allows for the collection of group-generated data, which can be a challenging experience.

### Observations

Patton<sup>12</sup> described observation as a useful tool in both quantitative and qualitative research: “[it involves] descriptions of activities, behaviours, actions, conversations, interpersonal interactions, organization or community processes or any other aspect of observable human experience”. Observation is critical in both interviews and focus groups, as nonalignment between verbal and nonverbal data frequently can be the result of sarcasm, irony, or other conversational techniques that may be confusing or open to interpretation. Observation can also be used as a stand-alone tool for exploring participants' experiences, whether or not the researcher is a participant in the process.

Selecting the most appropriate and practical method is an important decision and must be taken carefully. Those unfamiliar with qualitative research may assume that “anyone” can interview, observe, or facilitate a focus group; however, it is important to recognize that the quality of data collected through qualitative methods is a direct reflection of the skills and competencies of the researcher.<sup>13</sup> The hardest thing to do during an interview is to sit back and listen to participants. They should be doing most of the talking—it is their perception of their own life-world that the researcher is trying to understand. Sophisticated interpersonal skills are required, in particular the ability to accurately interpret and respond to the nuanced behaviour of participants in various settings. More information about the collection of qualitative data may be found in the “Further Reading” section of this paper.

It is essential that data gathered during interviews, focus groups, and observation sessions are stored in a retrievable format. The most accurate way to do this is by audio-recording (with the participants' permission). Video-recording may be a useful tool for focus groups, because the body language of group members and how they interact can be missed with audio-recording alone. Recordings should be transcribed verbatim and checked for accuracy against the audio- or video-recording, and all personally identifiable information should be removed from the transcript. You are then ready to start your analysis.

## DATA ANALYSIS

Regardless of the research method used, the researcher must try to analyze or make sense of the participants' narratives. This analysis can be done by coding sections of text, by writing down

your thoughts in the margins of transcripts, or by making separate notes about the data collection. Coding is the process by which raw data (e.g., transcripts from interviews and focus groups or field notes from observations) are gradually converted into usable data through the identification of themes, concepts, or ideas that have some connection with each other. It may be that certain words or phrases are used by different participants, and these can be drawn together to allow the researcher an opportunity to focus findings in a more meaningful manner. The researcher will then give the words, phrases, or pieces of text meaningful names that exemplify what the participants are saying. This process is referred to as “theming”. Generating themes in an orderly fashion out of the chaos of transcripts or field notes can be a daunting task, particularly since it may involve many pages of raw data. Fortunately, sophisticated software programs such as NVivo (QSR International Pty Ltd) now exist to support researchers in converting data into themes; familiarization with such software supports is of considerable benefit to researchers and is strongly recommended. Manual coding is possible with small and straightforward data sets, but the management of qualitative data is a complexity unto itself, one that is best addressed through technological and software support.

There is both an art and a science to coding, and the second checking of themes from data is well advised (where feasible) to enhance the face validity of the work and to demonstrate reliability. Further reliability-enhancing mechanisms include “member checking”, where participants are given an opportunity to actually learn about and respond to the researchers’ preliminary analysis and coding of data. Careful documentation of various iterations of “coding trees” is important. These structures allow readers to understand how and why raw data were converted into a theme and what rules the researcher is using to govern inclusion or exclusion of specific data within or from a theme. Coding trees may be produced iteratively: after each interview, the researcher may immediately code and categorize data into themes to facilitate subsequent interviews and allow for probing with subsequent participants as necessary. At the end of the theming process, you will be in a position to tell the participants’ stories illustrated by quotations from your transcripts. For more information on different ways to manage qualitative data, see the “Further Reading” section at the end of this paper.

## ETHICAL ISSUES

In most circumstances, qualitative research involves human beings or the things that human beings produce (documents, notes, etc.). As a result, it is essential that such research be undertaken in a manner that places the safety, security, and needs of participants at the forefront. Although interviews, focus groups, and questionnaires may seem innocuous and “less dangerous” than taking blood samples, it is important to

recognize that the way participants are represented in research can be significantly damaging. Try to put yourself in the shoes of the potential participants when designing your research and ask yourself these questions:

- Are the requests you are making of potential participants reasonable?
- Are you putting them at unnecessary risk or inconvenience?
- Have you identified and addressed the specific needs of particular groups?

Where possible, attempting anonymization of data is strongly recommended, bearing in mind that true anonymization may be difficult, as participants can sometimes be recognized from their stories. Balancing the responsibility to report findings accurately and honestly with the potential harm to the participants involved can be challenging. Advice on the ethical considerations of research is generally available from research ethics boards and should be actively sought in these challenging situations.

## GETTING STARTED

Pharmacists may be hesitant to embark on research involving qualitative methods because of a perceived lack of skills or confidence. Overcoming this barrier is the most important first step, as pharmacists can benefit from inclusion of qualitative methods in their research repertoire. Partnering with others who are more experienced and who can provide mentorship can be a valuable strategy. Reading reports of research studies that have utilized qualitative methods can provide insights and ideas for personal use; such papers are routinely included in traditional databases accessed by pharmacists. Engaging in dialogue with members of a research ethics board who have qualitative expertise can also provide useful assistance, as well as saving time during the ethics review process itself. The references at the end of this paper may provide some additional support to allow you to begin incorporating qualitative methods into your research.

## CONCLUSIONS

Qualitative research offers unique opportunities for understanding complex, nuanced situations where interpersonal ambiguity and multiple interpretations exist. Qualitative research may not provide definitive answers to such complex questions, but it can yield a better understanding and a springboard for further focused work. There are multiple frameworks, methods, and considerations involved in shaping effective qualitative research. In most cases, these begin with self-reflection and articulation of positionality by the researcher. For some, qualitative research may appear commonsensical and easy; for others, it may appear daunting, given its high reliance on direct participant–researcher interactions. For yet others, qualitative research may appear subjective, unscientific, and consequently unreliable. All

these perspectives reflect a lack of understanding of how effective qualitative research actually occurs. When undertaken in a rigorous manner, qualitative research provides unique opportunities for expanding our understanding of the social and clinical world that we inhabit.

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#### Further Reading

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