

Qualitative Approaches in Health Services Research: A Methodological Primer

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ABSTRACT Qualitative methods are essential in health services research. Unlike quantitative methods, qualitative approaches are most effective in exploring the “how” and “why” of complex social phenomena, offering rich insights into attitudes, beliefs, and experiences that might otherwise be overlooked. Aimed at research teams new to qualitative work, this paper introduces qualitative research methods, explaining key terms, data collection strategies, and analytic approaches. We also discuss the theoretical foundations of and methodological rigor in qualitative research. Additionally, we present a novel model that conceptualizes qualitative research as the scaffolding for other research methods within the hierarchy of evidence, highlighting its role in generating hypotheses and adding greater context to quantitative findings. By providing an accessible overview of rigorous approaches to qualitative research, we hope to encourage greater application of qualitative methods in health services research.

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Ms Sierpe and Drs Leyenaar and Saunders drafted the initial manuscript, reviewed and revised the manuscript, and approved the final manuscript as submitted.

CONFLICT OF INTEREST DISCLOSURES: The authors have no conflicts of interest to disclose.

FUNDING: The authors received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Accepted for Publication Date: January 25, 2025

<https://doi.org/10.1542/hpeds.2024-007978>

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INTRODUCTION

Qualitative research methods are a family of approaches to collecting, analyzing, and interpreting data to understand people's attitudes, beliefs, motivations, and experiences.¹ Qualitative approaches are concerned with describing, decoding, and understanding the meaning but not the frequency of naturally occurring phenomena in the social world.² While quantitative methods can produce precise and reliable answers to some research questions, qualitative methods are uniquely well suited to questions of "how" and "why."³ In health services research, this might include questions like "How do children experience hospitalization?" and "Why do certain health care policies succeed in improving patient access in some communities but not in others?" In providing researchers with important tools for exploring processes that may otherwise not be readily studied, qualitative methods can offer insights into not only the outcomes but also the complex mechanisms behind health care delivery and policy.

Despite these strengths, qualitative methods have historically been devalued, especially in contrast to quantitative work. Between 1996 and 2016, the prevalence of qualitative methods in clinical research increased dramatically, according to a 2021 review.⁴ However, the impact of qualitative research as measured by citations decreased over the same period, suggesting potential concerns among researchers about the relevance or credibility of qualitative work.⁴

The concept of an evidence hierarchy emerged from the evidence-based medicine movements of the 1990s and 2000s.⁵ This is popularly conceptualized as a pyramid, with the least reliable study designs on the bottom and the most reliable on top. Most often, if qualitative research even appears on the pyramid, it is at the bottom, relegated as unreliable and nearly unscientific. We have reframed the evidence pyramid, proposing that as a hypothesis-generating and conceptualizing exercise, qualitative research builds the scaffolding on which other research methods lie (Figure 1).⁶⁻⁸ Qualitative approaches add nuance and can strengthen the rigor of other research designs and our overall understanding of phenomena in clinical practice, quality improvement, and quantitative research.

While qualitative methods are fundamental to the advancement of research across disciplines, many researchers are less familiar with these approaches and may hesitate to use them. To increase understanding of the value and mechanics of qualitative methods, we present this article as a practical and accessible guide on foundational qualitative research concepts and approaches in health services research.

THEORETICAL FOUNDATIONS FOR QUALITATIVE RESEARCH

A solid understanding of the theoretical foundations for qualitative research is a critical starting point for guiding the research process and ensuring its rigor throughout. These theoretical elements have

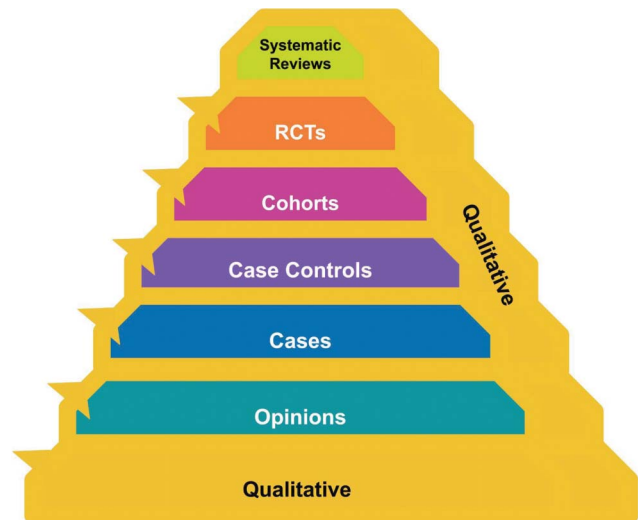


FIGURE 1. Qualitative insight as the scaffolding of health services research. Qualitative research can inspire and contextualize most other forms of inquiry. Qualitative research can bolster or challenge expert opinions, giving them heft and grounding them in rigorous scholarly approaches. With cases and case controls, qualitative inquiry can examine the lived experiences of individuals experiencing unusual or rare presentation of disease. Qualitative research can also expand our understanding of cohort studies, uncovering new symptoms of experiences that may not have been selected by clinicians and researchers alone. Qualitative studies are a robust addition to randomized controlled clinical trials, with qualitative inquiry helping interpret the use of interventions in complex health care and community settings. Including qualitative research in systematic reviews and meta-analyses provides a much more rigorous interpretation of phenomena, along with justifying the need for systematic analyses altogether. Most of all, qualitative research can begin inquiry by generating hypotheses and patient- and family-centered priorities.

substantial influence on research design, data analysis, and the interpretation of results.⁹

One key concept is *ontology*, which addresses the question of what reality is—do we believe there is a single objective reality, or do multiple subjective realities exist?⁹ Many qualitative researchers adopt the latter view and focus on understanding different perspectives. For instance, we may assume patients and clinicians have different experiences of the same clinical encounter, with both perspectives being equally true. Closely tied to this is *epistemology*, which is concerned with how we come to acquire knowledge. This shapes researchers' approaches in deciding what methods are appropriate, how data are interpreted, and what knowledge is considered reliable.⁹ For example, a researcher might believe they can come to accurately know a patient's experience of care by observing their interactions in health care settings.

Axiology refers to the researcher's understanding of values and their own role in research.⁹ As qualitative research often involves the

interpretation of personal stories, researchers should maintain awareness of their own values and how they may impact their research, while also ensuring they do not overshadow participants' voices.^{1,3} Related to this, *reflexivity* and *positionality* are important concepts in qualitative research. Reflexivity is the process of actively examining one's own assumptions and biases, while positionality describes a researcher's personal and professional characteristics, like their class, gender, job title, and experiences with health care.^{1,9} While some view qualitative methods as biased due to their findings inherently being influenced by researchers' positionality, this perceived weakness may be leveraged as a strength.^{1,9} By drawing on diverse viewpoints and infusing the interpretation of results with these perspectives, we can arrive at unique insights that other methods might not otherwise uncover.

Qualitative researchers often base their work on a *conceptual framework*, which serves as a guiding structure to organize the study and interpret findings. It outlines key concepts and how they relate to each other, providing a map for the research.¹ These frameworks can aid researchers in determining the most relevant aspects of a phenomenon to explore.¹ One common framework used in pediatric research is Bronfenbrenner's ecological systems theory, which views a child's development as being influenced by different layers of their environment, from immediate settings like their family to broader ones like the health care system.¹⁰ In a qualitative study of children's hospitalization experiences, a research team using this framework would aim to examine not just the child's direct interactions with clinicians but also how family involvement and hospital policies affect their experiences. By using this conceptual framework, researchers can ensure the study remains responsive to their research questions while also grounding the research in existing knowledge on child development and health care, therefore improving the applicability of the findings.

COLLECTING QUALITATIVE DATA

Qualitative research starts with gathering rich, nuanced data. The choice of what methods to use to collect these data should be led by the research questions at hand.^{1,9} The data may be collected by the research team or may already be available, like published documents or electronic health records.^{1,3} Researchers can also have participants create their own data, such as by asking patients to journal about their care experiences.³

Qualitative interviewing is one of the most common methods of data collection and can be conducted using anything between a predetermined list of questions to a totally open-ended approach.¹¹ However, *semistructured interviews* are the typical choice for health service researchers because they ensure the researcher can collect data on the topics of interest while still allowing flexibility in exploring new topics in greater depth.⁹ *Focus groups* are also common, with larger numbers of participants engaging in shared discussion. Skilled *facilitation* is crucial to interview and focus group studies.¹¹ Researchers must use *prompts* and *probes* to keep the conversation centered on relevant topics while also eliciting further detail when needed, with the understanding that the most

salient details can sometimes arise during off-topic discussion.¹¹ Prompts are follow-up questions about specific topics, while probes aim to encourage the participant to expand on answers with greater detail or to clarify ambiguities.^{1,11} Other forms of data collection include *observational work* and *ethnography*, in which researchers take notes on what people do and say in public or private settings.^{1,9}

Qualitative research typically uses *purposive sampling*, in which researchers intentionally select participants based on their personal characteristics, experiences, and other criteria relevant to the research questions.^{1,9} Unlike quantitative research, qualitative methods are not frequentist, meaning their findings do not aim to produce findings statistically generalizable to the entire population.⁹ Rather, they focus on proposing or contextualizing hypotheses and developing salient *themes*.² In qualitative work, themes are overarching ideas or patterns that reappear prominently throughout the data.³ Similarly, instead of calculating statistical power, qualitative researchers collect data until they reach *saturation* or *sufficiency*, meaning the data collected can be considered adequate in addressing the research questions.¹²

ANALYZING QUALITATIVE DATA

Analytic approaches may be conceptualized as being *deductive*, meaning the approach to analysis is prespecified and "top-down."¹ Researchers start with a theory, develop hypotheses from that theory, and then collect and analyze data to test their hypotheses. In contrast, *inductive* approaches are exploratory and "bottom-up."¹ Researchers begin with observations, look for patterns within the data, and then generate theories based on the patterns identified.¹ Researchers can also use a hybrid approach, combining both deductive and inductive analysis. Most methods of analyzing qualitative data involve *coding*, which is the process of organizing and reducing data to make it easier to identify cross-cutting themes.¹³ Coding can be done with sticky notes, spreadsheets, or specialized software like NVivo (Lumivero) and ATLAS.ti.¹³ While coding approaches vary, the general recommendation to reduce bias is for researchers to code most of the data independently, with occasional team check-ins to maintain consistency and responsiveness to the research questions.¹ Although some researchers share the frequencies of their codes and work to have numeric consistency across the team, many caution against this approach, favoring overall agreement of salient themes.¹³

In terms of specific approaches to analyzing qualitative data, there are several different methods, and we cannot offer a comprehensive list. *Content analysis*, for example, involves counting and identifying patterns in the data and is often used for analyzing published materials such as newspaper articles.¹ In *framework analysis*, which is commonly used in policy-oriented work, the data are organized using a grid-like layout and analyzed according to the rows and columns. While rare in health services research, *grounded theory* uses an inductive and iterative approach in which both the hypotheses and findings develop from the data, unlike other methods that begin with predetermined research questions and hypotheses.¹⁴ Perhaps the most commonly adopted and flexible approach for health

services research questions is *thematic analysis*, which involves identifying, analyzing, and interpreting recurring patterns of meaning in the data in the form of themes.¹³ In our work training research teams new to qualitative methods, we developed *practical thematic analysis*.¹³ This is an accessible yet methodologically rigorous approach to participatory analysis in which teams work collaboratively through the process of familiarizing themselves with the data, assigning codes to organize the data, and generating shared themes.¹³

METHODOLOGICAL RIGOR IN QUALITATIVE RESEARCH

Like with quantitative work, qualitative researchers must ensure they use appropriate methods of sampling, data collection, and analysis as part of a rigorous process of scientific inquiry.² To establish the trustworthiness of their results, researchers should consider how the rigor of their methods can be assessed against specific criteria. First, *credibility* refers to whether the findings are internally valid and plausible.¹⁵ This can be established by methods like *triangulation*, which refers to combining multiple sources of data, such as conducting both interviews and structured observation.^{2,12} *Transferability* describes the external validity of the research, or the extent to which the findings can be transferred to another setting, context, or group.¹⁵ This can be addressed by providing detailed descriptions of the sample and setting so that other researchers can accurately compare them with other contexts.¹⁵ To enhance *dependability*, or the ability to replicate the research under similar conditions, research teams should ensure the analysis is conducted by multiple people.² In the case of thematic analysis, this might involve having 2 or more researchers develop themes first independently and then coming together to justify them as a team.¹³ Some may also increase dependability by *member checking*, in which they share data such as summaries of interview transcripts with participants, who provide feedback and confirm their accuracy.^{1,12} Lastly, *confirmability* refers to the data having a clear link with the results.¹⁵ One way to show this relationship is to provide detailed descriptions of themes with quotes from participants illustrating the themes within the data.¹⁵ By addressing these criteria throughout the research process, qualitative researchers can ensure their work is methodologically rigorous and trustworthy.

It is also important to consider the issue of rigor in disseminating qualitative results. Many clinically oriented journals welcome the submission of qualitative research articles, and qualitative research is increasingly presented at regional and national clinical research conferences. It has become generally expected for qualitative health services researchers to use established *reporting guidelines* when disseminating their work. The most commonly used checklists for this include the Standards for Reporting Qualitative Research¹⁶ and the Consolidated Criteria for Reporting Qualitative Research,¹⁷ although there are debates among qualitative methodologists about the utility and actual rigor of these approaches.¹⁸

CONCLUSION

Qualitative methods provide a powerful yet flexible approach to health services research, offering essential insights into complex phenomena that might otherwise remain hidden. While the clinical landscape has traditionally been dominated by quantitative methods, qualitative methods provide distinct and complementary tools to examine the nuances of health care delivery and patient experiences. By embracing and rigorously applying qualitative methods, researchers can more effectively address critical questions that quantitative data alone cannot answer, ultimately enhancing clinical practice, policy, and quality improvement efforts. As qualitative methods continue to evolve, adopting standards that support rigor and trustworthiness will further increase their credibility and impact within the hierarchy of evidence. We hope that moving forward, more researchers will gain access to and confidence in using qualitative methods, enabling them to contribute new knowledge to the field and advance a deeper, more comprehensive understanding of health care.

Acknowledgments

We acknowledge Dr Meredith MacMartin's suggestions on methodology and her feedback on our figure.

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