Assessing Research Protocols: Qualitative Research
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1. Defining qualitative research:
Qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. (Denzin & Lincoln, 2005, p. 3) (1)

2. Types of qualitative inquiry and data collection implications
There are broadly five types of qualitative inquiry that include phenomenology, ethnography, grounded theory and case studies, that are described below (2)

I. *Phenomenology*: The study of individuals' perceptions, feelings, and lived experience

II. *Ethnography*: The researcher describes and interprets the shared and learned patterns of values, behaviors, beliefs, and language of a culture-sharing group

III. *Grounded theory*: Extending beyond a description of a phenomenon to generate or discover a theory, analytical schema of a process, action or interaction

IV. *Case studies*: The detailed study of an issue explored through one or more cases within a specific setting/context.

V. *Narrative research*: Spoken or written text giving an account of an event/action or series of events/actions, that are chronologically connected with the individual as the unit of analysis

The type of data collection strategies utilized in a qualitative study varies based on the qualitative approach being used. Table 1 provides an overview of the different types of qualitative inquiry and related data collection strategies.

Table 1: Types of qualitative inquiry and data collection implications (1)

Type of Approach	Defining Features	Data Collection Implications
Phenomenology	- Focuses on individual experiences, beliefs, and perceptions - Text used as a proxy for human experience	• Questions and observations are aimed at drawing out individual experiences and perceptions. • In focus groups, group experiences and normative perceptions are typically sought out • In-depth interviews and focus groups are ideal methods for collection
Ethnography	- Oriented toward studying shared meanings and practices (i.e., culture) - Emphasizes the emic perspective - Can have a contemporary or historical focus	• Questions and observations are generally related to social and cultural processes and shared meanings within a given group of people. • Traditionally, it is associated with long- term fieldwork, but some aspects are employed in applied settings • Participant observation is well suited to

		ethnographic inquiry
Grounded theory (GT)	- Inductive data collection and analytic methods - Uses systematic and exhaustive comparison of text segments to build thematic structure and theory from a body of text. - Common analytic approach in qualitative studies	• As above, in-depth interviews and focus groups are the most common data collection techniques associated with GT
Case Study	- Analysis of one to several cases that are unique with respect to the research topic - Analysis primarily focused on exploring the unique quality	• Cases are selected based on a unique (often rarely observed) quality • Questions and observations should focus on, and delve deeply into, the unique feature of interest
Narrative research	- Narratives (storytelling) used as the source of data - Narratives from one or more sources (e.g., interviews, literature, letters, diaries)	• If generating narratives (through in-depth interviews), then questions/tasks need to be aimed at eliciting stories and the importance those stories, hold for participants, as well as larger cultural meaning

The type of qualitative approach utilized as the basis for the research project also informs the analytical strategy used to assess the data collected (3). Below is a list showcasing the linkages between common qualitative approaches and associated analytical strategies. Table 2 illustrates the alignment between qualitative approaches, research questions and analytical strategies using breast cancer research as an example (3).

- Grounded theory → Constant comparative analysis
- Narrative research → narrative analysis (generating, interpreting, and representing stories)
- Ethnography → ethnographic analysis (representation, inscription, translation, and textualisation of culture into writing)
- Phenomenology → Phenomenological reduction; hermeneutic analysis

Table 2: Alignment between qualitative approach, research question and analytical strategy

Approach	Research question	Analytic strategy	Research product
Grounded theory	How do women with breast cancer cope with changes to body image?	Constant comparative analysis	Theory regarding basic social processes involved in coping with breast cancer and factors that might account for variations
Phenomenology	What is the lived experience of having breast cancer?	Phenomenological reduction; hermeneutic analysis	Description of the essential structure of breast cancer experience
Ethnography	How is breast cancer understood and managed in different social contexts?	Representation, inscription, translation, and textualisation of culture into writing	Typology of interpretations, relations, and variations within breast cancer experience
Narrative research	How do women with breast cancer come to know their experience?	Narrative analysis; generating, interpreting, and representing women's stories in narrative form	Narrative accounts of women's explanations for their breast cancer experience

3. Sampling in qualitative research

Sampling in qualitative research is broadly considered to be 'purposive', i.e., there is greater emphasis on the ensuring that the participants are able to provide key insights into answering the proposed research question, rather than generalizing findings from sample to the general population (4). The appropriate sample size for a qualitative study would be one that allows the researcher to adequately address the key research questions being put forth by the study (5) (6). Sample sizes in qualitative studies may also be informed by the choice of data collection method, i.e., focus groups vs. in-depth interviews, and guidelines around sample sizes associated with the use of certain data collection methods. Broadly all sampling in qualitative research is considered to be purposeful sampling, however there is a significant degree of diversity within the purposeful sampling approach. Table 3 provides an overview of various sampling strategies used in qualitative research.

Table 3: Overview of sampling approaches in qualitative research (6)

Author	Sampling type
Strauss & Corbin (1990)	Theoretical sampling — three stages • Open sampling • Relational and variational sampling • Discriminate sampling
Patton (1990)	All sampling is purposeful — 15 strategies • Extreme or deviant case sampling • Intensity sampling • Maximum variation sampling • Homogeneous samples • Typical case sampling • Stratified purposeful sampling • Critical case sampling • Snowball or chain sampling • Criterion sampling • Theory-based or operational construct sampling • Confirming and disconfirming cases • Opportunistic sampling • Purposeful random sampling • Sampling politically important cases • Convenience sampling
Morse (1991)	Four types: • Purposeful sample • Nominated sample • Volunteer sample • Total population sample
Sandelowski (1995)	All sampling is purposeful — three kinds • Maximum variation • Phenomenal variation

	• Theoretical variation

4. Assessing rigor and validity in qualitative research

The 'trustworthiness' of qualitative research is assessed in the context of four key dimensions - credibility, transferability, dependability, and confirmability (7) (8, p 4)

- Credibility refers to the researcher's efforts to demonstrate that an accurate representation of the issue or topic being examined has been presented.

  → *Credibility may be assessed by having outside auditors or participants validate findings (member checks), peer debriefing, attention to negative cases, independent analysis of data by more than one researcher, verbatim quotes, persistent observation etc.*

- Transferability in qualitative research involves the researcher providing enough detail around the overarching context of the fieldwork conducted to enable the reader to determine if the surrounding context environment is comparable to other situations, or if findings are applicable to other settings.

  → *Transferability may be assessed by providing details of the study participants to enable readers/evaluators to evaluate for which target groups the study provides valuable information, providing contextual background information, demographics, the provision of thick description about both the sending and the receiving context etc.*

- The dependability criterion refers to the extent to which a study may be replicated by other researchers, i.e., the process by which the research was conducted is logical, traceable and clearly documented.

  → *Dependability may be assessed by debriefing, audit trails, triangulation in the context of the use of different methodological approaches to look at the topic of research, reflexivity to keep a self-critical account of the research process, and calculation of inter-rater agreements etc.*

- With respect to confirmability of qualitative research/findings, researchers must demonstrate that appropriate steps were taken over the course of the research process, such that findings emerged directly from the data rather than the preconceived notions or perspectives of the researcher themself.

  → *Confirmability may be examined by assessing the effects of the researcher during all steps of the research process, reflexivity, providing background information on the researcher's background, education, perspective, school of thought etc*

Several different techniques to improve the validity of qualitative research have been discussed in the literature (9). Some commonly used approaches have been described in more detail below (9):

I. *Triangulation*: Triangulation is used to compare findings from two or more distinct methods of data collection, i.e., interviews and focus groups) or more broadly two or more data sources i.e., interviews with members of different participant/interest groups. Patterns of convergence between methods and/or data sources are examined to support the development of or corroboration of an overall interpretation.

II. *Respondent validation*: Respondent validation, also commonly referred to as *member checking* involves comparing the researcher's analysis of data collected with the account of research subjects to ensure a level of correspondence between the two accounts. Respondent feedback/responses to the researcher's analyses are then incorporated into study findings.

III. *Reflexivity*: Reflexivity refers to sensitivity and acknowledgement of the ways in which the researcher and the overall research process (specifically the investigators own assumptions and past experience) influence and inform the collected data. Personal and intellectual biases, personal characteristics including age, sex, social class, and professional status, as well as the relationship between the researcher and study participants, and their potential 'effects' on the data collected need to be made transparent by the researcher.

IV. *Attention to negative cases*: Qualitative researchers are also encouraged to consider alternative explanations for the data collected, and should systematically explore and describe aspects of the data that may potentially contradict the emerging explanation of the phenomena being explored, to help hone the analyses to the point that the emerging findings/theory are credible.

V. *Fair dealing*: Exploring a diverse range of perspectives (participant, stakeholder etc.) is seen as vital to validity in qualitative research design such that the opinions of single groups is not portrayed as the 'sole truth' with regards to the phenomenon under study.

5. Checklist for assessing qualitative research proposals

The use of explicit quality criterion to assess qualitative research is widely debated in the literature. Broadly there is a consensus that clear and transparent approaches for evaluating the quality or credibility of research is critical, however there is little agreement on what standards or specific criterion should be employed (10). In the past few years, a number of different tools and techniques have been developed to support the critical appraisal of qualitative research. A summary of key items to consider in assessing a qualitative research proposal, that have been drawn from the National Institute of Health and Care Excellence's methodology checklist for assessing qualitative research, is available in Table 4.

Table 4: Summary of items to consider in assessing a qualitative research proposal (11)

What to look for	Description
✓ Clear justification for use of a qualitative methods including what role they will play if used in conjunction with other methods	→ Does the research question seek to understand processes or structures, or illuminate subjective experiences or meanings (i.e., in the context of healthcare this would apply to how care is organized and patient experiences of care) OR could a quantitative approach better have addressed the research question? → Does the research methodology seek to understand WHAT is happening and the reasons WHY observed situations or outcomes occur?
✓ Justification for the type of qualitative approach being employed	→ Are the research questions and type of qualitative inquiry proposed to answer research questions aligned?
✓ Discussion of data sources and data collection methods, and alignment with proposed qualitative approach	→ Is there a clear and detailed description of the data sources and collection methods (including limitations of each source and/data collection method)? → Are the data collection methods appropriate for the proposed qualitative approach? → Are the characteristics of the participants and settings clearly defined?
✓ Description of the analysis strategies including steps to ensure rigor/reliability of findings, and alignment between type of qualitative inquiry and proposed analysis strategy	→ Will data be collected by more than one method? → What data analysis approaches have been proposed and are they aligned with the type of qualitative approach being used to guide the study? → What strategies will be used to improve validity of findings?
✓ Discussion of team characteristics regarding past experience with qualitative research	→ Does the team have researchers who are experienced in conducting qualitative research?

6. References:

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