Overview of Qualitative Research Methods Part III

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1

Welcome to the third and final module in the Overview of Qualitative Research Methods series. My name is Julie Stoner and I am a Professor at the University of Oklahoma Health Sciences Center.

This introductory series is based on a graduate course that I developed with Dr. Toby Hamilton from the OUHSC College of Allied Health. Much of the content was developed by Dr. Hamilton and is driven by her work as an occupational therapist and qualitative researcher.

Learning Objectives

- Discuss data collection strategies in qualitative research
- Identify strategies for ensuring rigor in qualitative research

2

In this third module we will highlight different data collection approaches in qualitative methods and will discuss approaches to ensure rigor.

We will discuss four primary approaches for data collection in qualitative studies:

1. Interviews
2. Focus Groups
3. Direct Observation
4. Drawings, Picture, Artifacts

There are other approaches, but we will focus on these.

Data Collection Strategies: Interviews

- Approach
  - Semi-structured – interview guide
  - Individual one-on-one interviews
  - Record, transcribe and review to identify themes
- Strengths
  - Helpful to address sensitive topics not willing to discuss in a group setting
  - Easier to schedule with an individual than a group
- Drawbacks
  - Individual may not be engaged in the conversation or not talkative
  - Requires a lot of time to complete for multiple participants

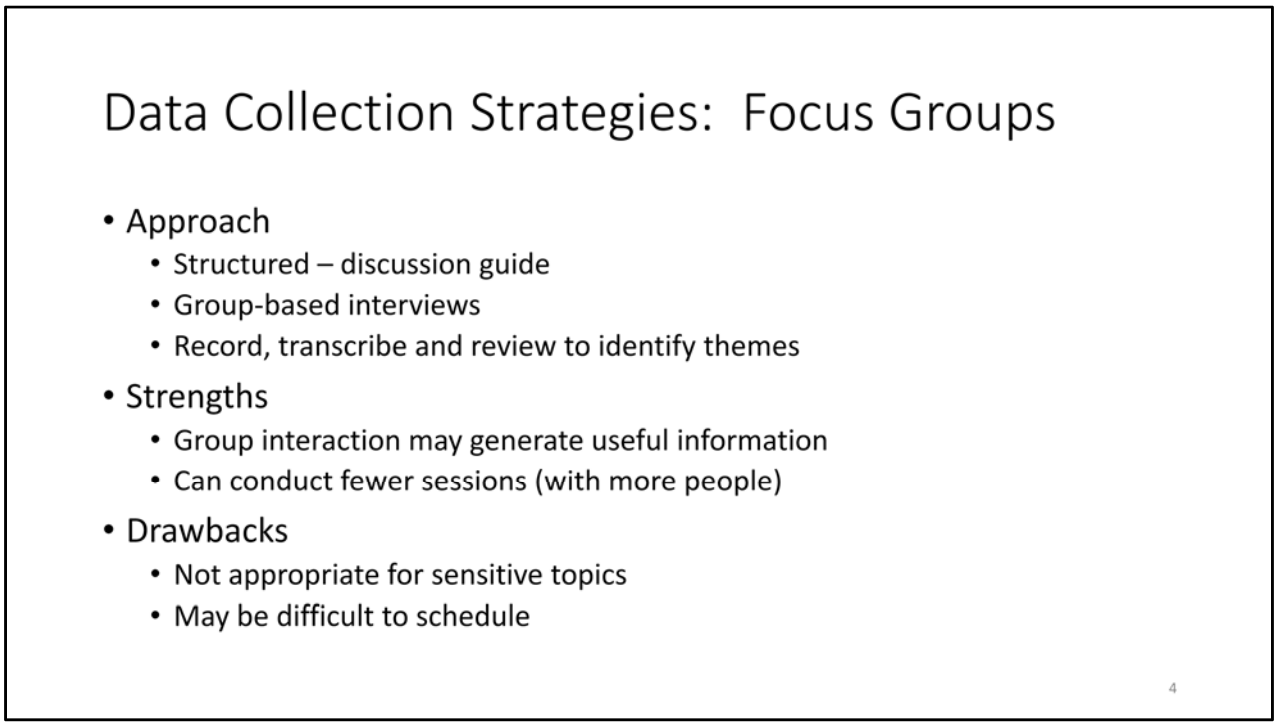
3

For each data collection method, we will highlight the approach, strengths and drawbacks. You will learn more details about semi-structured interviews and focus groups in subsequent training sessions. For now, let's just consider general information.

When collecting information using interviews, to ensure that the interview focuses on key issues or areas, the interviewer will typically follow an interview guide with primary open-ended questions and probes, or sub-questions, that may be needed. These are conducted in one-on-one sessions The interview is recorded and the conversation is transcribed. The transcript is reviewed by multiple investigators to identify themes. Note that in some cases, where the investigator knows less about the topic area, the interview will be less structured, allowing the participant greater opportunity to carry the conversation.

Interviews are appropriate for sensitive topics where participants may not be comfortable discussing the topics in a group setting. Interviews are easier to schedule based on a single participant's schedule than other types of discussions that involve multiple participants' schedules.

There are some drawbacks. It may be more difficult to engage some participants in a one-on-one conversation. Given that each interview is devoted to one participant, conducting multiple interviews may require a lot of time for the investigators.



When collecting information using focus groups, interviews are conducted in a group setting. The focus group facilitator follows a discussion guide with primary open-ended questions and probes, or sub-questions, that may be needed. The facilitator ensures that everyone is participating and has an opportunity to express their thoughts. The session is recorded and the conversation is transcribed. The transcript is reviewed by multiple investigators to identify themes.

Focus groups are particularly appealing when the topic of conversation benefits from the social setting of a focus group. For example, comments from one participant may trigger a response from another participant. A fewer number of sessions may be required, compared to interviews, because multiple people are involved in a given session and provide information.

There are some drawbacks. Focus groups are not appropriate for sensitive topics where participants may not be comfortable discussing the topics in a group setting. Scheduling can be difficult due to multiple participants' schedules.

Data Collection Strategies: Direct Observation

- Approach
  - Observe settings/physical environment, e.g., classrooms, home-based childcare facilities, doctor's office
  - What is present? What is absent?
  - Observe interactions: record patient/doctor exchange, video and audio, observe children on a playground
- Strengths
  - Information that captures another aspect or perspective beyond participant responses to questions
  - Useful for those who cannot speak (e.g., children) or do not know the language of the investigator
  - Useful for "triangulating" relative to other sources of information
- Drawbacks
  - May not know what is important to look for

5

With direct observation, investigators take field notes of settings and physical environments, such as classrooms, home-based childcare facilities, and doctor's offices. They are noting what is present and what is absent (for example, it would be unusual if child artwork was not displayed in a pre-school classroom). In addition to the physical environment, investigators may observe interactions between people, for example, recording observations related to patient/doctor exchanges, or child behavior among kids on a playground. Some will use video and audio recordings, in addition to note-taking. This could be particularly helpful in more complicated situations, such as addressing health literacy and adherence questions among patients receiving difficult information such as a cancer diagnosis.

Direct observation is helpful to capture subjective and contextual information that is not easily captured through interviews or focus group sessions. The information goes beyond participant responses. Direct observation is also useful for those who cannot speak (e.g., children) or do not know the language of the investigator. Such information is useful in "triangulating" or validating information collected through other approaches such as interviews. For example, if patients express uncertainty and anxiety regarding their understanding of a cancer diagnosis, the recorded exchange between the patient and physician could also be viewed to capture other aspects of the discussion.

Direct observation is dependent on the perspective of the investigator. This positioning is important to understand the perspective of the investigator – for example, is the investigator a survivor of cancer or is the investigator an oncologist or oncology nurse?

Data Collection Strategies: Drawings/Pictures/Artifacts

- Approach
  - Ask participants to draw – e.g., narrative summary of influences over time, children expressing their feelings associated with a health condition
  - Take pictures of settings/environment
  - Collect artifacts – e.g., ethnography of particular community or culture
- Strengths
  - Information that captures another aspect or perspective beyond participant responses to questions
  - Participants may not be able describe in word their perspectives and decision-making process
  - Useful for "triangulating" relative to other sources of information
- Drawbacks
  - May only be relevant for certain questions, contexts or processes

6

Another form of data collection in qualitative research is through the creation of drawings, taking pictures or collecting artifacts. With this approach, investigators may ask participants to draw a picture that reflects their experience. For example, participants might be asked to draw a narrative summary of their struggles with substance abuse over time and represent their experience using a road map diagram. Or, investigators might ask children to draw a picture that shows their feelings regarding a particular condition, such as restless leg syndrome. As another approach, investigators could take pictures of an environment. They could also collect artifacts, for example, if studying health in a third-world country there may be important ceremonial artifacts.

Similar to direct observation, the use of drawings, pictures and artifacts is an approach to capture information about a particular factor or perspective that cannot be easily captured in words. Such information is useful in "triangulating" or validating information collected through other approaches such as interviews.

This approach may not be relevant to all types of qualitative inquiry.

Rigor Ensures Trustworthy Findings

ESTABLISHING TRUTH, APPLICABILITY, CONSISTENCY, & NEUTRALITY OF RESEARCH STUDIES		
INQUIRER'S QUESTIONS	RATIONALISTIC PARADIGM [5]	NATURALISTIC PARADIGM [5]
1. TRUTH VALUE How to establish confidence in the truth of findings for subjects / respondents & context in which inquiry was carried out.[1,3]	INTERNAL VALIDITY Extent to which variations in outcome or dependent variable can be attributed to controlled variation in an independent variable so a causal connection can be assumed.[1] Methods Control or randomize factors through study design. Trades control for generalizibility within external validity [1,3] for findings that are contamination-proof [5]	CREDIBILITY Confidence in findings based on research design, informants, & context. Adequate representation, description, or interpretation of experience.[2] Methods Methodology [1,2] including prolonged engagement [1,2,5], persistent observation [1,5], triangulation [1,2,5] (sources, methods, investigators, theories [5]), peer debriefing [1,5] or peer examination [2], negative case analysis [4], member checks [1,2,5], time sampling [2], interview technique [2] to produce plausible findings [5]
2. APPLICABILITY How to determine the extent to which findings of inquiry have application to other subjects / respondents & contexts.[1,3]	EXTERNAL VALIDITY Extent one can infer that presumed causal relationships can be generalized to & across alternate measures of the cause and effect, and across different types of persons, settings, & times.[1,3] Methods Randomized sampling. Trades generalizibility for control with internal validity [1] for findings that are context-proof [5]	TRANSFERABILITY Goodness of fit of the findings to contexts outside those studied. Dependent on degree of similarity of sending & receiving contexts. Burden of proof is responsibility of person wishing to transfer findings, not original investigator.[1,2] Methods Accumulation of empirical evidence of contextual similarity ,[1] dense description [2,5], nominated sample [2], purposive sampling [5] time sampling [2] to produce context-relevant findings [5]
3. CONSISTENCY How to determine whether the findings of inquiry would be repeated if replicated with same or similar subjects or respondents in same or similar context.[1,3]	RELIABILITY Extent to which one presumes findings are dependable, stable, consistent, predictable, & accurate. Reliability is prized not for its own sake, but as a precondition for validity; unreliable findings due to factors such as careless measurement or instrument decay cannot be valid [1,3] Methods Replication [1] for findings that are inconsistency-proof [5]	DEPENDABILITY Trackable variability so that variability can be traced to identified sources.[2] Taking into account factors of instability and factors of phenomenon or design [1]. There is no credibility without dependability [1]. Methods Dense description [2] for audit trail [2,5] or inquiry audit [1], stepwise replication, [1,2,5] code-recode data [2] triangulation [1,2], overlap methods [1,5], peer examination [2] for stable findings [5]
4. NEUTRALITY How to establish degree to which findings of inquiry were determined by subjects / respondents & conditions of the inquiry and not by the biases, motivations, interests, or perspectives of the inquirer.[1]	OBJECTIVITY Extent of intersubjective agreement by multiple observers who agree on a phenomenon so that collective objectivity exists, as opposed to subjectivity of an individual [1,5] Methods Agreement & methodology, especially experimental [1,5] for findings that are investigator-proof [5]	CONFIRMABILITY Neutrality of the data so that findings are a function of the informants and condition, not bias of the researcher.[2] Methods Audit trail [1,3] or confirmability audit using raw data, data reduction & analysis products [summaries, condensed notes, working hypotheses], data reconstruction and synthesis products [theme categories, interpretations], process notes [design & procedures], study proposal, & field journal [2], triangulation [2,5], reflexive analysis (field journal) [2] to produce investigator-free findings [5]

7

Similar to quantitative settings where we want to ensure rigor, we also want to ensure rigor in qualitative settings.

Notice that the first column has 4 general characteristics of research studies. The more rigorous these characteristics are, the more true, applicable, consistent, and neutral the findings are. Notice that you're familiar with terms in the 2nd column (rationalistic = positivistic paradigm for quantitative studies). In our design and analysis strategies, we aim to maximize internal validity, external validity, reliability, and objectivity.

Now look at the equivalent terms in the naturalistic paradigm in the 3rd column that relate to qualitative research studies. We value credibility, transferability, dependability and confirmability. In the naturalistic paradigm, there is a new set of terminology, but the overall concepts remain the same truth, applicability, consistency, and neutrality.

Chart compiled by Toby B. Hamilton, 1999. Sources:

1 Lincoln, Y. S. & Guba, E. G. (1985). Establishing trustworthiness. In Y. S. Lincoln & E. G. Guba, *Naturalistic inquiry*, (pp. 289-331). Beverly Hills, CA: Sage Publications.

2 Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy, 45* (3), 214-222.
3 Denzin, N. K. (1978). Sociological *methods*. New York: McGraw-Hill.
4 Kidder, L. H. (1981). Qualitative research and quasi-experimental frameworks. In M. B. Brewer & B. E. Collins (Eds.), *Scientific inquiry and the social sciences.* San Francisco: Jossey-Bass.
5 Guba, E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Resources Information Center Annual Review Paper, 29,* 75-91.

Summary

- Qualitative data collection methods – rich data
- Ensure rigor

8

In summary, we discussed four main approaches for data collection in qualitative research. We can see how each method, interviews, focus groups, direct observation, and pictures/drawings/artifacts, captures complex information from multiple perspectives that are context specific. Methods allow for subjectivity.

Similar to quantitative methods where we value rigor, we have similar aims in selecting design, data collection, and analysis to ensure value credibility, transferability, dependability and confirmability.

References

1 Lincoln, Y. S. & Guba, E. G. (1985). Establishing trustworthiness. In Y. S. Lincoln & E. G. Guba, *Naturalistic inquiry*, (pp. 289-331). Beverly Hills, CA: Sage Publications.

2 Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy, 45* (3), 214-222.

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3 Kidder, L. H. (1981). Qualitative research and quasi-experimental frameworks. In M. B. Brewer & B. E. Collins (Eds.), *Scientific inquiry and the social sciences.* San Francisco: Jossey-Bass.

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