

Qualitative methods overview and tool development

GSTTP research mini-course

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Learning objectives

- Explain the role and purpose of qualitative methods in public health/medical research.
- Describe types of qualitative research, the associated data collection methods, and strengths and limitations of each.
- Understand basic principles of qualitative instrument design and open-ended question formulation.

Disclaimers!

- I am a dual and mixed methods researcher: I conduct both qual & quant research, sometimes together (in a single study)
- Qualitative research is as complicated, robust and challenging as quant – no way I can do justice today!!
- This is only a very brief introduction to the topic & some key issues you may want to consider as a designer (& consumer) of research studies with a qualitative component or focus

What is qualitative research?

- Qualitative data = (usually) words
- Research questions amenable to qualitative data:
 - How & Why (& What) (not How Many/Much) → meaning, not frequency
 - *Not merely descriptive!*
- “Mixed methods” research = incorporates both qualitative & quantitative data
 - Side by side; or integrated/iterative

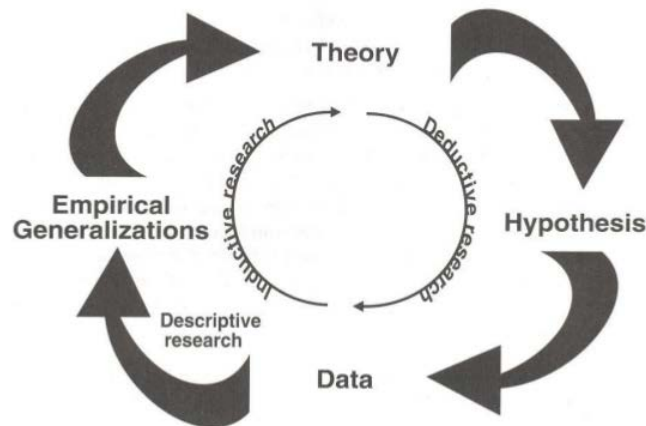
When is qualitative research particularly instructive?

- ... we want to understand views/perspectives
 - ... we want in-depth understanding of process or context
 - ... we want to understand How or Why
 - ... we do not understand, or cannot well measure, a phenomenon
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- Unnecessary divide between qual & quant
 - You should see them as complementary: qual can inform development of quant designs; can triangulate quant findings; can answer additional questions

Categories of qualitative research

- Inductive vs. deductive approach
 - Starting with a participant's observations & generalizing "upward" (hypothesizing about broader phenomena, theories, etc.) = inductive → grounded theory
 - Collecting data to test a pre-defined theory = deductive

DEDUCTIVE & INDUCTIVE REASONING



Types of qualitative methods (partial list)

- **In-depth interviews**: one-on-one conversation, guided by questions (can be broad or narrow; open-ended or semi-structured)
- **Focus group discussions**: group conversation, guided by questions & reliant on interaction/dialog across participants
- *Consensus methods*
- *Content analysis*
- *Field notes; diaries*
- *Cognitive interviewing*
- *Case studies*
- *Ethnography and participant observation*

Pros/cons of different qual approaches

Table 5.1 Advantages and disadvantages of data collection methods.

Data collection method	Advantages	Disadvantages
Interviews	Response rate relatively higher Clarification of responses can be undertaken	Potential for interviewer bias Relatively expensive to undertake
Focus groups	Group discussion can yield different information from individual interviews Large number of informants can participate in a short period of time	Participants may disagree with the consensus and remain silent Individual participants may take over the discussion
Questionnaires/surveys	Relatively cheap to administer Offer complete anonymity No interviewer bias as often self-administered Can reach a wider population than face-to-face data collection	Response rate can be relatively lower than face-to-face data collection Clarification of responses or non-response to certain items cannot be sought Forces respondent to choose from pre-determined responses
Validated tests/scales	Instrument validity and reliability established Can provide data that can be compared against established norms	Temptation to try and 'fit' research question to available instruments Scale norms may not 'fit' the groups studied
Observation	Participants observed during their daily interactions Potential to provide depth and variety of information about area of interest	Potential for observer bias Relatively expensive to undertake Likely to be very time consuming Ethical considerations

Sample selection

- Purposive: seek respondents relevant to & knowledgeable about the research question
 - Theoretical: based on a theory or hypothesis
 - Convenience
 - Snowball: may be particularly helpful for hard-to-reach populations
- Maximize variation or seek a homogenous sample?
 - May have implications for generalizability
- No strict rules about sample size: feasibility and “saturation”
 - Qualitative data collection is usually expensive, and demanding on the respondent so want to be respectful & ethical about extent of data collected

Analysis

- More on this in a few weeks!
- Briefly: transcribe the data, use a codebook to label text by concepts, identify & analyze themes

Validity in qualitative research

- Sample selection bias
- Social desirability bias
- Reporting bias
- Generalizability

Quick note on mixed methods

- Everything about qual remains true (& analogs are true for quant)
- Mixed methods “models” (Steckler et al, 1992):
 - Model 1: Qualitative methods to develop quantitative measures
 - Model 2: Qualitative methods to explain quantitative findings
 - Model 3: Quantitative methods to embellish qualitative findings
 - Model 4: Qualitative and quantitative methods used equally and parallel
- *Can read about this & other typologies in Creswell, “Designing and Conducting Mixed Methods Research”*

Principles of instrument design

- Questions should:
 - Be purposeful
 - Be concrete
 - Use relevant time periods
 - Use conventional phrasing/language
 - Not be double-barreled
 - Use neutral phrasing or purposively use negative/positive phrasing

Qualitative guides: Open-ended

- Open-ended interviews may have only 1 or 2 very broad questions
 - Tell me about xxxxx
 - What are your experiences with xxxxx
- The interviewer then asks follow-up questions to unpack details, clarify specifics, etc.
- May be preferable if you are conducting inductive qualitative research, if this is a topic on which little is already known, if there is no/limited theoretical framework to guide the discussion or no pre-specified domains of interest

Qualitative guides: Semi-structured

- Questions have more “shape” and clearer parameters for the respondent
- Still important to not be too narrow (this would be “structured”)
 - e.g.: Tell me about ways in which your doctor helps support your adherence to your HIV medications.
 - Not: “Does your doctor do XX” (simple Y/N question which is more appropriate for a survey) → if you want to ask something this specific, perhaps add “Tell me about this” or “What do you like or dislike about this” or “Why or why not” type prompt at the end

Some design pointers from my own experience

- Ask people about their own experiences – e.g., if you ask a doctor about their patients' experiences, these are biased data
 - An exception: For sensitive subjects, it may be helpful to ask about “other people in your community” or “people you know”
- “Why” is a challenging question –people may get defensive, or struggle to respond
 - Focus on sequences of events; specific attributes of interest...
- Consider question sequence: build rapport at the beginning, and don't end on a “sour note”
 - Wrap-up questions can be really revealing: “Is there anything else about this topic I haven't asked you about that you'd like to share with me” or “Of all the things we talked about, which do you think is most important”
- Depending on your topic, there may already be really great (& potentially validated) interview guides out there – google first!

Considerations when designing an interview

- How long? How many questions?
 - Longer than 1 hour is really tough
 - Depending on complexity of questions, ~10-12 questions may take ~ 1 hour
- There may be questions (asked of every single person more or less the same way) + probes (specific follow-ups that may be modified based on what the person tells you / mentions or does not mention)
 - And potentially skip patterns: depending on what someone says to question A, they may get asked question B or they may get skipped to question C
 - “Tell me about a time you spoke with a loved one about their end of life wishes.” If the person has never had such a conversation: “What do you think would help you have these conversations?”

Focus groups

- Remember: not a set of 1-on-1 interviews! You are seeking dialogue between group participants
 - Exception: might ask everyone around the table to answer the 1st and last questions
- Common approach: begin broad (ice breakers, setting the tone), and as group continues, questions get more specific & focused on the topic of interest
 - Often the first question is not what you care the most about
 - The last questions are summation to bring closure to group
- Can build in activities like brainstorming, sorting, drawing, group prioritization, etc.

Tips for collecting qualitative data

- Need a good interviewer / moderator
 - Robust knowledge of the topic
 - “Similar” to respondents often preferable (age, gender, role)
 - Very good grasp of the guide & purpose of the research, so can skip around & probe well
 - Skilled in collecting qualitative data: using verbal and non-verbal cues/encouragement, allowing pauses, probing (“could you explain that a little more for me?” “can you give me an example?”)
 - Focus group moderators need additional skills in guiding, managing and encouraging group dynamics
- Audio record with permission of respondent
 - & take notes (ideally a dedicated notetaker – this is necessary for a focus grp)

Resources

- UCLA library has a number of great books available online about qualitative research, including but not limited to:
 - How to Use Qualitative Methods in Evaluation (Quinn)
 - Handbook of Interview Research (Gubrium & Holstein)
 - The Survey Kit (Fink)
 - The SAGE Qualitative Research Kit (Flick)
 - Designing Qualitative Research (Marshall & Rossman)
 - Research Design: Qualitative, Quantitative and Mixed Methods Approaches (Creswell)
- Great video resources too, including but not limited to:
 - Yale U. “fundamentals of qualitative research methods” video series (6 modules starting with): https://youtu.be/wbdN_sLWI88
 - Focus group fundamentals: <https://richardakrueger.com/focus-group-interviewing/>