Introduction to qualitative analysis

GSTTP research mini-course

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Learning objectives

• Describe qualitative analysis methods (primarily deductive approaches) including steps of qualitative analysis.
• Practice developing and applying a codebook.
Refresher: 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
Refresher: 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
Analysis

• Data management: if audio-recorded, transcribe so you have a written document
  • If required, translate transcripts into English (can be done in 1 step if transcriptionists are fully bilingual)

• Coding: label text by concepts/themes (software can be used)
  • Can be defined up-front – e.g. based on theoretical framework
  • Can include (or consist entirely of) “emergent” codes
  • Double-coding (at least on subset) recommended for quality assurance

• Analysis
  • Can be descriptive
  • Can look for associations (between codes, themes by respondent type)
Coding: Process – for deductive analysis

• Draft a codebook based on underlying theoretical framework
  • Codes can be hierarchical (parent/child codes etc.) or the structure can be flat

• “Test run” this on a subset of interviews – should be done by >1 member of the team
  • Do the codes work? What’s missing? What’s too narrow or too broad?
  • Revise & refine codebook iteratively

<table>
<thead>
<tr>
<th>CFIR Codebook</th>
</tr>
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<tbody>
<tr>
<td><strong>Note:</strong> This template provides inclusion and exclusion criteria for most constructs. Please post additional inclusion and exclusion criteria, guidance, or questions to the CFIR Wiki discussion tab in order to help improve the CFIR.</td>
</tr>
<tr>
<td>This template only includes CFIR definitions and coding criteria; codebooks may include other information, such as examples of coded text, rating guidelines, and related interview questions.</td>
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<tr>
<th>I. Innovation Characteristics</th>
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<tr>
<td>A. Innovation Source</td>
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<tr>
<td>Definition: Perception of key stakeholders about whether the innovation is externally or internally developed.</td>
</tr>
<tr>
<td>Inclusion Criteria: Include statements about the source of the innovation and the extent to which interviewees view the change as internal to the organization, e.g., an internally developed program, or external to the organization, e.g., a program coming from the outside. Note: May code and rate as “I” for internal or “E” for external.</td>
</tr>
<tr>
<td>Exclusion Criteria: Exclude or double code statements related to who participated in the decision process to implement the innovation to Engaging, as an indication of early (or late) engagement. Participation in decision-making is an effective engagement strategy to help people feel ownership of the innovation.</td>
</tr>
<tr>
<td>B. Evidence Strength &amp; Quality</td>
</tr>
<tr>
<td>Definition: Stakeholders' perceptions of the quality and validity of evidence supporting the belief that the innovation will have desired outcomes.</td>
</tr>
<tr>
<td>Inclusion Criteria: Include statements regarding awareness of evidence and the strength and quality of evidence, as well as the absence of evidence or a desire for different types of evidence, such as pilot results instead of evidence from the literature.</td>
</tr>
<tr>
<td>Exclusion Criteria: Exclude or double code statements regarding the receipt of evidence as an engagement strategy to Engaging: Key Stakeholders.</td>
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<tr>
<td>Exclude or double code descriptions of use of results from local or regional pilots to Trialability.</td>
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https://cfirguide.org/evaluation-design/qualitative-data/
Coding, continued

• Once you have a solid draft codebook, >1 team member should apply this to a subset of transcripts
  • May wish to calculate inter-rater reliability: does everyone apply codes consistently

• Then, can begin coding in earnest
  • Need to decide: one coder per transcript or >1?
  • You’ll get faster at coding as you do more of it, but it is time-consuming – and it’s important to be attentive & read carefully, so you don’t want to rush it
Tips for codebooks & coding

• Codes should be broadly applicable (not so narrow to only be relevant once or twice) and discrete (clear boundaries and no overlap)

• Codes should either always, or never, have valence/direction (positive or negative, barrier or facilitator, etc.)

• Team should decide if they want to take a “lumper” (big codes that may require more work later during analysis to disaggregate) or a “splitter” (small codes that may require more up-front work to specify and refine) approach
Using software
Analysis

• Interpreting the data: identifying & comparing themes

• Read through coded data

• Identify similarities, repetitions, clusters of codes/sub-codes

• Label the meaning of these = themes

• Organize and compare these in order to answer your research question(s)
Writing & publishing

• Guidelines for reporting
  • COREQ (Consolidated criteria for reporting qualitative research)
  • SQRQ (Standards for reporting qualitative research)

• Some challenges in publishing:
  • Word limit for many biomedical journals
  • Not all journals are interested in qualitative research
  • Not all reviewers are qualified to assess quality of qualitative research
  • Tension around degree to which you quantify the findings
Example #1: Malawian men & cervical cancer

• Qualitative data from women indicated that spousal support for screening & treatment of cervical cancer is a barrier for some women

  “After I was told that I have cancer signs and that they need to treat, I went back home and people started saying that I will never again have any more children and that they have seen people who have been treated from lesions but they never gave birth again. My husband got scared and he asked around to see whether that is true or not. Most responses told him that it’s true so yesterday he came back home and said our marriage is over.” (23, HIV-)

• So we decided to talk to men about their knowledge, opinions, impressions of cervical cancer disease & screening
Mixed methods study

- **Quantitative data**
  - Demographic characteristics
  - Knowledge about CC & screening (true/false questions)
  - Experience with CC disease (know anyone who had it), and screening (*was wife ever screened*)
  - Gender attitudes (GEM scale)
  - Household decision-making
  - Decision-making for screening

- **Qualitative data**
  - Role of men in CC prevention
  - “Could you please explain in your own words how cervical cancer screening is done”
  - “I will now briefly describe how cervical cancer screening is done... What makes you comfortable? What makes you uncomfortable or worried? Overall, would you feel comfortable having your wife screened?”
  - “You said earlier that your wife or partner also received treatment for an abnormal cervical cancer screening result. Did she face any barriers to receiving this treatment or problems with treatment?”
Our codebook – developed inductively

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example quote(s)</th>
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<tbody>
<tr>
<td>ScreeningHypotheticallyPainful</td>
<td>Respondent has heard the screening procedure is / could be painful</td>
<td>“R: Other women do complain about the pain. I: How about your wife did she complain anything about that? R: We did not talk much about that but all I know is that some women do complain about the pain.” (ID_121 NM)</td>
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<td>ScreeningExperience_Painful</td>
<td>Respondent has heard directly from his wife that the screening procedure was painful</td>
<td>“R: Okay She did not say anything about pain? R: She mentioned about the pain to say when they were moving the metal there was some sound[imitating]... But not too much pain” (ID_135 SL)</td>
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<td>ScreeningExperience_Waittime</td>
<td>Respondent noted the wait time at the clinic</td>
<td>“R: What did she say about the waiting of the results and the length she had to wait? R: She mentioned that it was too long but she had to wait for the results as it was for the essence.” (ID_132 AN)</td>
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<tr>
<td>ScreeningExperience_Other</td>
<td>Respondent noted other factors that negatively affected the screening experience</td>
<td>“R: What happened was that when she returned home, it took us two weeks to start sleeping with each other again.” (ID_172 AN)</td>
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<td>ScreeningDescription</td>
<td>Respondent’s answer to the question about describing CC screening</td>
<td>“R: I have heard about it a little. I: OK, could you explain that to me? R: I hear women go in a room and they undress because when screening thy screen inside a woman’s genital.” (ID_179 NM)</td>
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<tr>
<td>CC risk factors Hygiene</td>
<td>Respondent comments on the importance of male and female hygiene; specifically</td>
<td>“R: Uh Can you explain more about husband’s hygiene and cervical cancer? What kind of hygiene should it be so that the husband should not give cervical cancer to the wife?”</td>
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• Compared by men’s characteristics: older/younger, partner screened Y/N, gender equity scale score
Example #2: Health behaviors among Malawians living with hypertension & HIV

• Qualitative study led by Khumbo Phiri (who you will soon meet) – this was part of her MPH thesis

• Interviews with 30 HIV-positive Malawian adults who were also hypertensive

• Interview guide included questions about care-seeking (not explored in this analysis) + about health behaviors
Richer data, so could do a deeper thematic analysis

• Main themes:
  • High awareness of hypertension and benefits of treatment
  • Social support helps with adherence to medication
  • Acceptability of skipping or stopping medication if feeling healthy
  • Relatively infrequent reports of side effects/ adverse events as barrier to adherence
  • Alternative & complementary medicines (esp among ppl with poor adherence)
  • Dietary changes are important but can be challenging
  • Reducing stress and stressful relationships is part of self-care for hypertension
  • Hypertension imposes employment changes and financial constraints
Also “meta themes”

• Cut across the aforementioned topics
  
  • Hypertension’s relationship with household finances, especially for women
    • Hypertension > Employment challenges > Financial strain
    • Can affect adherence, nutrition, care-seeking, stress…
    • Exacerbated by household structures/dynamics: few spouses, many dependents

• Gender roles affect health behaviors
  • Wives accommodated husbands’ dietary needs, but not vice-versa
  • Women altered their social relationships in response to HTN diagnosis
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 SAGE Qualitative Research Kit (Flick)
  • Research Design: Qualitative, Quantitative and Mixed Methods Approaches (Creswell)