Beyond Numbers: Building Your Skills in Qualitative Research

Association of Pediatric Program Directors (APPD) Spring Conference
Friday April 1st, 9-11 am
Studio 9-10

Welcome!

- Alyssa Bogetz, MSW (Stanford University)
- Erika Abramson, MD, MS (Weill Cornell Medical College)
- Arabella Simpkin, MD, MA (Harvard Medical School)
- Catherine Michelson, MD (Boston Medical Center)
- Su-Ting Li, MD, MPH (University of California, Davis)

Acknowledgments

- Janice Hanson, PhD, EdS (Children’s Hospital Colorado)
Disclosures

- The authors have no financial relationships or conflicts of interest to disclose.

Objectives

- Define qualitative research and describe four criteria to ensure its methodological rigor
- Discuss the philosophical frameworks underlying qualitative research and apply one to the development of a research question
- Practice selecting approaches to sampling, data collection and analysis

Workshop Overview

<table>
<thead>
<tr>
<th>Topic</th>
<th>Time Allotted</th>
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</thead>
<tbody>
<tr>
<td>Definition, rationale and methodological rigor</td>
<td>10 min</td>
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<tr>
<td>Philosophical foundations</td>
<td>10 min</td>
</tr>
<tr>
<td>Developing a research question activity</td>
<td>30 min</td>
</tr>
<tr>
<td>Sampling and data collection techniques activity</td>
<td>15 min</td>
</tr>
<tr>
<td>Data analysis techniques and practice activity</td>
<td>45 min</td>
</tr>
<tr>
<td>Wrap-Up, resources, and evaluation</td>
<td>10 min</td>
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</tbody>
</table>
Handouts
1. Qualitative Methods Worksheet and Planning Guide
2. Establishing Trustworthiness
3. Philosophical Frameworks and Research Methods
4. Sampling Strategies
5. Sample Transcript
6. Data Analysis Worksheet
7. Additional Considerations and Resources

Tell Us About You...
- How many are new to qualitative research?
- How many have participated in qualitative research (data collection, analysis, etc.)?
- How many have led a qualitative investigation?

What is Qualitative Research?
- Research designed to understand the perspectives and experiences of individuals or groups and the contexts in which these are situated
- Empirical and theoretical
  - Based on observations
  - Often concerned with developing or exploring theory
- Focuses on meaning
Natural Fit for Clinician Educators

- How do we, as educators, make sense of:
  - Educational experiences
  - Complex learning environments
  - Patient experiences and interactions
  - Identity, professionalism, wellness

- How do we, as learners, make sense of:
  - Educational experiences
  - Complex learning environments
  - Patient experiences and interactions
  - Identity, professionalism, wellness

Qualitative Research Requires Rigor

- Asking appropriate research questions
- Developing appropriate study designs
- Collecting data in a justifiable and ethical way
- Conducting trustworthy analyses
- Producing evidence that is relevant and useful to others

Four Criteria to Ensure Rigor

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Quantitative Counterpart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>Extent to which findings are trustworthy and believable to others</td>
<td>Internal Validity</td>
</tr>
<tr>
<td>Transferability</td>
<td>Extent to which findings can be applied in different settings</td>
<td>External Validity</td>
</tr>
<tr>
<td>Dependability</td>
<td>Extent to which findings are consistent with context generated</td>
<td>Reliability</td>
</tr>
<tr>
<td>Confirmability</td>
<td>Extent to which findings are based on participants’ and not researchers’ views</td>
<td>Objectivity</td>
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</table>
A Different Way of Seeking the “Truth”

**Quantitative**
- Positivist
- Single reality
- Deductive
- Test hypothesis
- Objective
- Emphasizes measurement
- Generalized
  - “Thinner data” on large number of cases

**Qualitative**
- Constructivist
- Multiple realities
- Inductive
- Generate hypothesis
- Subjective
- Emphasizes meaning/interpretation
- Contextual
  - “Thicker data” on relatively few cases
Complementary Frameworks

Ethnography
The researcher observes a culture to understand the meaning of experiences or phenomena from the perspective of those living in that culture.

- What do first year residents learn in the hidden curriculum about the value placed on self-care in the medical profession?
  - Prolonged observation by researcher (participant-observer)
  - Field notes
  - Document review (e.g., charts, evaluations, meeting minutes)
  - Interviews (though used less frequently)

Phenomenology
The researcher studies the meaning of a phenomenon or a lived experience to gain a detailed understanding of that experience.

- What is the lived experience of pediatric residents and fellows who experience anxiety and depression during their medical training?
  - Interviews and focus groups
  - Reflective essays
  - Written narratives/responses to open-ended questions

Grounded Theory
The researcher immerses herself/himself in the data to create a theory that has real-world practical applications and can be tested or studied further.

- What factors promote resilience in pediatric residents? What internal factors contribute to resilience? What external/environmental factors contribute to resilience?
  - Interviews and focus groups
  - Reflective essays
  - Written narratives/responses to open-ended questions
  - Field notes
  - Document review
  - Surveys with open-ended questions

Complementary Frameworks

<table>
<thead>
<tr>
<th>Framework</th>
<th>Definition</th>
<th>Research Question</th>
<th>Data Collection Methods</th>
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Small Group Activity 1
Developing a Qualitative Research Question

1. Divide into small groups of 4-5
2. Introduce yourself and share previous experiences with qualitative research (5 min)
3. Develop one research question using your group’s philosophical framework related to wellness and burnout prevention (15 min)
4. Prepare to share research question and framework with large group (10 min)
Four Criteria to Ensure Rigor

Criteria
- Credibility
- Transferability
- Dependability
- Confirmability

Strategies to Achieve
- Study Design & Framework
- Sampling
- Data Collection
- Data Analysis

Sampling
- Quantitative vs. Qualitative Sampling
- Qualitative Sampling:
  - Random
  - Convenience
  - Typical
  - Extreme
  - Confirming/disconfirming
  - Maximum variation
  - Snowball
  - Criterion

Purposeful sampling techniques

Data Collection
- 4 common data collection techniques
  - Interviews
  - Focus groups
  - Observations
  - Document review (narrative essays, evaluations, etc.)
- Sample size determination
  - Iterative sampling
  - Reaching thematic saturation (no new information is emerging)
  - Themes repeat, different sources of data triangulate, disagreements among analyzers become consensus, data “make sense”
Small Group Activity 2
Developing a Sampling and Data Collection Plan

1. In your small groups, discuss potential sampling strategies you can use to answer your research question (5 min)

2. Discuss how you would collect data to answer your research question. Consider quality criteria, data triangulation and saturation of themes (10 min)

Four Criteria to Ensure Rigor

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<th>Sampling</th>
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Data Analysis

- Who will be part of your analysis team?
  - How will you divide the work?
    - Everyone codes all transcripts
    - Everyone codes first X transcripts, agrees on coding schema and then divides up the remaining transcripts

- What will you use to help organize your analysis?
  - Qualitative data analysis software (Atlas.ti, Hyperresearch, Nvivo, etc)
  - Excel
  - Notecards

- Data analysis steps
  - Read through data
  - Develop preliminary code list
  - Discuss code list with colleagues to finalize code list and create a code book (iterative process)
  - Code remaining transcripts using code book
  - Organize codes into categories, themes
<table>
<thead>
<tr>
<th>Barriers</th>
<th>Code List</th>
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<tr>
<td>There seems to not be enough time in the day. Sometimes I find I'm just too tired to focus on reading.</td>
<td>Time</td>
</tr>
<tr>
<td>More pressing issues of day-to-day work and patient care</td>
<td>Tired</td>
</tr>
<tr>
<td>Time constraints with work</td>
<td>Time</td>
</tr>
<tr>
<td>When I’m home I want to do other things</td>
<td>Being tired</td>
</tr>
<tr>
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### Barriers to Achieving Learning Goals

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### Barriers to Achieving Learning Goals

<table>
<thead>
<tr>
<th>Themes</th>
<th>Code</th>
<th>Quotes</th>
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<tbody>
<tr>
<td>Environmental strain</td>
<td></td>
<td>• There seems not to be enough time in the day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Time</td>
</tr>
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<td>• Being constantly tired</td>
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<td></td>
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<tr>
<td>Competing demands</td>
<td></td>
<td>• Having too many other pressing matters to attend</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td>• When I’m home I want to do other things</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life-work balance</td>
<td></td>
<td>• Having too many other pressing matters to attend</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
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<td></td>
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</tr>
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<td></td>
<td></td>
<td>• When I’m home I want to do other things</td>
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</table>
Small Group Activity 3
Practicing Data Analysis

1. Use transcript and analysis worksheet to practice analyzing data (25 min)
   a. Read the transcript on your own
   b. Develop preliminary code list
   c. Discuss your code list with your small group, refine list
   d. Reapply agreed upon code list to transcript
   e. Develop list of categories and associated themes

2. Large group report out (10 min)
   a. What did you notice during this process?
   b. Was this easier than you expected? Harder? Why?

Objectives
- Define qualitative research and describe four criteria to ensure its methodological rigor
- Discuss the philosophical frameworks underlying qualitative research and apply one to the development of a research question
- Practice selecting approaches to sampling, data collection and analysis

Conclusions
- Qualitative research is a valuable tool for clinician educators
- Strong, publishable research requires rigor, attention to the research question, guiding philosophical framework, and four quality criteria (credibility, transferability, dependability, and confirmability)
- Qualitative research takes dedication, patience and time! There’s no “right way” or “one size fits all” approach
- Consider collaborating with an experienced qualitative researcher or carefully review the literature and other resources before you begin
What Questions Can We Answer for You?

Thank You!
- Please share one key insight or lesson learned that you will apply to your own qualitative research project
- Please complete the brief (1-2 min) evaluation at your tables so we can improve this workshop for future years!

Eager to Learn More?
- Alyssa Bogetz, abogetz@stanford.edu
- Erika Abramson, err9009@med.cornell.edu
- Catherine Michelson, Catherine.Distler@bmc.org
- Arabella Simpkin, arabella.simpkin@gmail.com
- Su Ting Li, sutli@ucdavis.edu