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!

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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

Topic	Time Allotted
Definition, rationale and methodological rigor	10 min
Philosophical foundations	10 min
Developing a research question activity	30 min
Sampling and data collection techniques activity	15 min
Data analysis techniques and practice activity	45 min
Wrap-Up, resources, and evaluation	10 min

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
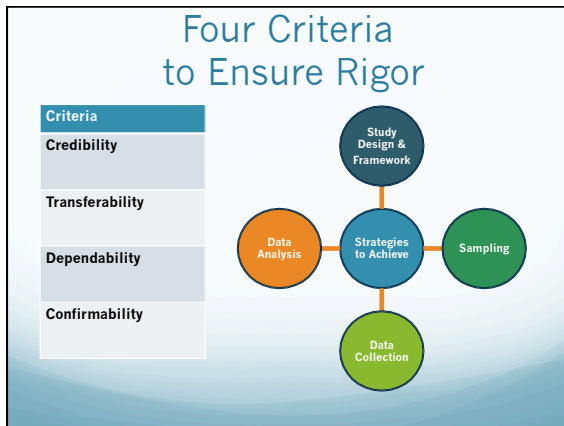
Natural Fit for Clinician Educators

- 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
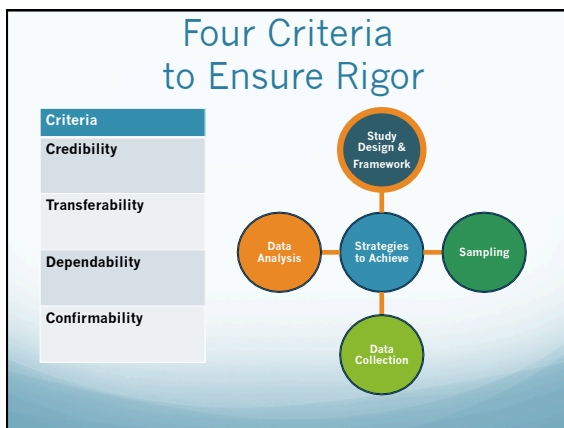 - Identity, professionalism, wellness
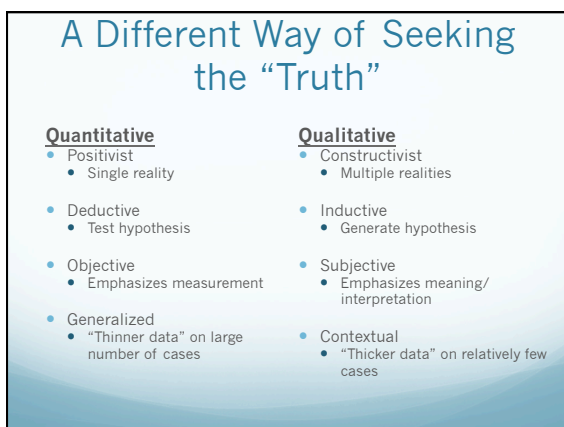
Qualitative Research Requires Rigor

- 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

Criteria	Definition	Quantitative Counterpart
Credibility	Extent to which findings are **trustworthy** and **believable** to others	*Internal Validity*
Transferability	Extent to which findings can be **applied in different settings**	*External Validity*
Dependability	Extent to which findings are **consistent** with context generated	*Reliability*
Confirmability	Extent to which findings are based on **participants'** and not researchers' **views**	*Objectivity*

Four Criteria to Ensure Rigor

Criteria
Credibility
Transferability
Dependability
Confirmability

Study Design & Framework

Data Analysis — Strategies to Achieve — Sampling

Data Collection

Four Criteria to Ensure Rigor

Criteria
Credibility
Transferability
Dependability
Confirmability

Study Design & Framework

Data Analysis — Strategies to Achieve — Sampling

Data Collection

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

Grounded Theory

Phenomenology

Constructivism

Complementary Frameworks

Philosophical Framework	Definition	Research Question	Data Collection Methods
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 her/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

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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

Study Design & Framework

Data Analysis

Strategies to Achieve

Sampling
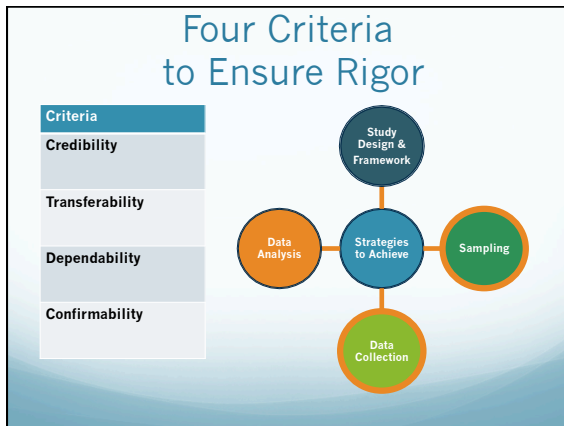
Data Collection

Sampling

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

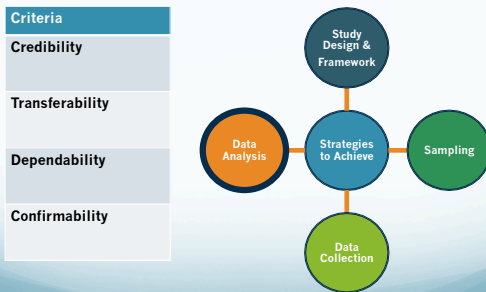*Purposeful sampling techniques*

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

Criteria
Credibility
Transferability
Dependability
Confirmability

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

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

Example: Barriers to Achieving Learning Goals

Barriers
There seems to not be enough time in the day. Sometimes I find I'm just too tired to focus on reading.
More pressing issues of day-to-day work and patient care
Time constraints with work
Time
When I'm home I want to do other things
Being tired
Having too many other pressing matters to attend to
Being constantly tired
Time
Balancing work and family

Li ST, et al. Successful Self-Directed Life-Long Learning in Medicine: A Conceptual Model Derived from Qualitative Analysis of a National Survey of Pediatric Residents. Academic Medicine. 2010; 85(7):1229-1236.

Barriers to Achieving Learning Goals

Barriers	Code List
There seems to not be enough time in the day. Sometimes I find I'm just too tired to focus on reading.	**Time**
More pressing issues of day-to-day work and patient care	
Time constraints with work	
Time	
When I'm home I want to do other things	
Being tired	
Having too many other pressing matters to attend to	
Being constantly tired	
Time	
Balancing work and family	

Barriers to Achieving Learning Goals

Barriers	Code List
There seems to not be enough time in the day. **Sometimes I find I'm just too tired to focus on reading.**	Time
More pressing issues of day-to-day work and patient care	**Tired**
Time constraints with work	
Time	
When I'm home I want to do other things	
Being tired	
Having too many other pressing matters to attend to	
Being constantly tired	
Time	
Balancing work and family	

Barriers to Achieving Learning Goals

Barriers	Code List
There seems to not be enough time in the day. Sometimes I find I'm just too tired to focus on reading.	Time
More pressing issues of day-to-day work and patient care	Tired
Time constraints with work	Patient care/learner balance
Time	
When I'm home I want to do other things	
Being tired	
Having too many other pressing matters to attend to	
Being constantly tired	
Time	
Balancing work and family	

Barriers to Achieving Learning Goals

Barriers	Code List
There seems to not be enough time in the day. Sometimes I find I'm just too tired to focus on reading.	Time
More pressing issues of day-to-day work and patient care	Tired
Time constraints with work	Patient care/learner balance
Time	Balancing life and work
When I'm home I want to do other things	
Being tired	
Having too many other pressing matters to attend to	
Being constantly tired	
Time	
Balancing work and family	

Barriers to Achieving Learning Goals

Themes	Code	Quotes
Environmental strain	Time pressures	• There seems to not be enough time in the day • Time • Time constraints with work
	Tired	• Sometimes I find I'm just too tired to focus on reading • Being tired • Being constantly tired
Competing demands	Patient care-learner balance	• Having too many other pressing matters to attend to • More pressing issues of day-to-day work and patient care
	Life-work balance	• Balancing work and family • When I'm home I want to do other things

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?

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- 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

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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

3/21/16

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?

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