

***Beyond Numbers:
Building Your Skills In Qualitative Research
Workshop Materials and Resources***

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Qualitative Research Planning Worksheet

1. Group's research question:

2. What theoretical framework will you use to answer your question? Why?

- ☐ Ethnography (observe a culture)
- ☐ Phenomenology (gain a detailed understanding of a phenomenon/lived experience)
- ☐ Grounded Theory (develop a theory, framework or conceptual model that links ideas/concepts together)

3. What sampling strategy will you use to recruit participants? Why?

4. What data collection methods would best answer your research question? Why? (Select all that apply)

- ☐ Individual interviews (structured or semi-structured; open-ended questions to probe for detail)
- ☐ Focus groups (structured or semi-structured; open-ended questions to probe for detail; usually 6-10 people in each group)
- ☐ Written narratives/reflections or responses to open ended questions
- ☐ Observation ("watch what happens" in the setting of interest)
- ☐ Document analysis (archives, charts, journals, meeting minutes)

5. How will you ensure the trustworthiness of your analysis? How will know when you're done collecting data? (Select all that apply)

- ☐ Triangulation (collect data from multiple sources to see if themes are similar and repeat; use observers and multiple methods of collection where possible)
- ☐ Peer debriefing (work with two or more researchers to discuss findings that emerge during data collection and analysis)
- ☐ Saturation of themes (collect data until no new concepts/themes emerge)
- ☐ Member checking (ask participants if themes "make sense" and accurately express the meaning they tried to convey)
- ☐ Audits (document all study procedures)
- ☐ Reflexivity (examine own biases in relation to data, analysis and interpretations)

Establishing Trustworthiness and Validity in Qualitative Research

Criteria	Quantitative Counterpart	Research Methods to Ensure Trustworthiness and Validity
Credibility (Extent to which findings are trustworthy and believable to others)	Internal validity	<ul style="list-style-type: none"> • Triangulation (gathering more than one source of data and/or using more than one observer) • Prolonged observation (observing for long periods on multiple occasions to gather detailed evidence and experience the context of the situation under study) • Skillful interview technique (using trained qualitative interviewers, asking questions that generate descriptions and probe for details, establishing rapport and trusting relationships between participant(s) and interviewer(s))
Transferability (Extent to which findings can be applied in different settings)	External validity	<ul style="list-style-type: none"> • Detailed description of setting, sample and results (Methods & Results sections of manuscripts) • Description should enable audience to determine if results are transferable to their settings
Dependability (Extent to which findings are consistent with the context in which they were generated)	Reliability	<ul style="list-style-type: none"> • Rigorous study design that includes systematic, purposeful sampling and iterative data collection and analysis (esp. when developing theory) • Multiple analyzers (at least two researchers participate in data analysis) • Saturation of themes (collect data until no new themes emerge) • Peer debriefing (researchers discuss ideas that emerge during data collection and analysis) • Member checking (researchers ask participants if themes from data analysis “make sense” and accurately express the meaning they tried to convey)
Confirmability (Extent to which findings are based on participants’ and not researchers’ views)	Objectivity	<ul style="list-style-type: none"> • Documentation of all procedures including stages and outcomes of data analysis and interpretation of results (leave a “paper” trail so a person who did not conduct the study would be able to determine if the researchers’ reasoning and conclusions make sense) • Reflexivity (Examine own biases in relation to analysis and interpretation of findings)

Philosophical Frameworks for Qualitative Research

Philosophical Framework	Definition	Data Collection Methods	Considerations for Data Collection	Sample Research Question
Ethnography	The researcher observes a culture to understand the meaning of experiences or phenomena from the perspective of those living in that culture.	<ul style="list-style-type: none"> • Prolonged observation by researcher (participant-observer) • Field notes • Document review (e.g., charts, evaluations, meeting minutes) • Interviews (though used less frequently) 	<ul style="list-style-type: none"> • What examples of behavior do you see, or conversations do you hear, that informs the phenomenon of interest? • What is the context in which you observed these behaviors or conversations? • How will you document these observations (i.e., checklist, field notes, video and/or audio-recordings)? 	What do first year residents learn in the hidden curriculum about the value placed on self-care in the medical profession?
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.	<ul style="list-style-type: none"> • Interviews and focus groups • Reflective essays • Written narratives/responses to open ended questions • Field notes • Document review • Surveys with open ended questions 	<ul style="list-style-type: none"> • How can you capture a broad range of experiences? • How can you gather enough data to reach <u>saturation</u> (i.e., no new concepts emerge from your data)? • How will you know when you've reached saturation? (categories/themes repeat, data triangulate, disagreements are resolved) 	What factors promote resilience in pediatric residents? What internal factors contribute to resilience? What external/environmental factors contribute to resilience?
Phenomenology	The researcher studies the meaning of a phenomenon or a lived experience to gain a detailed understanding of that experience.	<ul style="list-style-type: none"> • Interviews and focus groups • Reflective essays • Written narratives/responses to open ended questions 	<ul style="list-style-type: none"> • How can you capture an in-depth understanding of the phenomenon of interest? • How can you gather enough data to reach saturation (i.e., no new concepts emerge from your data)? • How will you know when you've reached saturation? (categories/themes repeat, data triangulate, disagreements are resolved) 	What is the lived experience of pediatric residents and fellows who experience anxiety and depression during their medical training?

Sampling Strategies

In **quantitative research**, random sampling allows findings to be representative of general population.

In **qualitative research**, **purposeful sampling** allows a richer understanding of phenomena. Aside from random and convenience sampling, the remaining sampling strategies are examples of purposeful sampling.

Sampling strategy	Description	Example	When is it useful
Random	Randomly select participants out of the general population	Computer-generated random number selection of participants	Quantitative research
Convenience	Select participants due to convenience, expediency	Select participants only on days PI is in clinic (Monday afternoons)	Avoid if possible - least rigorous method. Used in cases of very limited resources.
Typical cases	Select participants that typify phenomenon under ordinary circumstances	Select participants with typical experiences (parents of hospitalized patients with average length of stay)	Understand key elements of a phenomenon under normal circumstances
Extreme (deviant) cases	Select participants with experiences considered to be outliers	Select participants with extreme experiences (parents of hospitalized patients with extremely prolonged length of stay)	Develop a richer understandability of phenomena
Confirming and disconfirming cases	Select participants whose story might be similar and those whose story might be very different from current theories	After a portion of data collection and analysis has been completed in order to generate themes, select additional participants whose stories exemplify theory (confirming cases) and others whose stories seem to run counter to theory (disconfirming cases)	Examples to add richness and depth to existing data analysis; Examples to allow investigators to evaluate rival explanations/themes.
Maximum variation	Select participants in order to maximize differences in predetermined criteria thought to be important to research question	Select participants of different ages, gender, cultural background to understand the impact of television commercials on food choices	Understand how a phenomenon is seen by different people in different circumstances
Snowball (chain)	Select participants based on information given by key informants	Identify key informant. Key informant then identifies other key informants.	Identify cases based on expert opinion
Criterion	Select participants based on predefined criteria	Select participants who rate their doctor as “poor”	Understand information-rich cases

Sample size determination:

- Iterative sampling – move back and forth between sampling and data analysis.
- Continue sampling until saturation is reached (no new information is emerging)

How do you know when you’re done collecting data (i.e., when you’ve reached saturation)?

- Categories repeat, themes repeat
- Disagreements become consensus (between analyzers)
- Different sources of data triangulate
- Data “make sense” in light of existing literature and/or theory

Qualitative Analysis Worksheet

Preliminary Code List (Code List Developed on Your Own)	Secondary Code List (Finalized Code List Following Discussion with Colleague)	Categories/Concepts (These emerge following application of your final code list to your transcript)

Emerging Themes

(Can you combine your categories/concepts into a few broad themes? If so, write these below)

Additional Considerations for Your Qualitative Projects

1. Use valid interview and focus groups guides, observation forms and other tools
 - ☐ Review the literature for published forms you can use as is or adapt with permission from authors
 - ☐ Have experts review your documents and provide feedback on clarity and content
 - ☐ Pilot test your interview guide with 3-5 individuals identical to your study sample; revise guide as needed
2. Develop a data management strategy before you begin
 - ☐ Determine what system you will use to manage and analyze your data
 - ☐ Ensure your system is HIPAA compliant and all identifying information is protected and secured
 - ☐ Many cloud storage systems are not HIPAA compliant (e.g., Dropbox, iCloud). Box and Backblaze are HIPAA compliant.
 - ☐ Determine whether you will use qualitative data analysis software. Popular software include:
 - Atlas.ti (\$99/2 years)
 - Dedoose (\$10.95/month)
 - Hyperresearch (\$499 flat rate)
 - NVivo (\$90-670 full)

Helpful Resources for Qualitative Research Planning and Study Design

Hanson J, Balmer D, Giardino AP. Qualitative research methods for medical educators. *Academic Pediatrics*. 2011;11(5):375-386.

Malterud, Kirsti. Qualitative research: standards, challenges, and guidelines. *The Lancet*. 2001;483-488.

Maxwell, Joseph A. "Designing a qualitative study." *Handbook of applied social research methods*. 2nd Edition, (2009): 214-253

Miles et al. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Sage Publications; 2014.

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med*. 2014 Sep;89(9): 1245-51.

Stalmeijer RE1, Mcnaughton N, Van Mook WN. Using focus groups in medical education research: AMEE Guide No. 91. *Med Teach*. 2014 Nov;36(11): 923-39.

Watling CJ, Lingard L. Grounded theory in medical education research: AMEE Guide No. 70. *Med Teach*. 2012;34(10): 850-61.

Examples of Qualitative Research in the Medical Education Literature

Ethnography:

Balmer, DF et al. An ethnographic study of attending rounds in general pediatrics: Understanding ritual. *Med Education*. 2010. 44(11): 1105-1116.

Grounded Theory:

Gan R, Snell L. When the learning environment is suboptimal: Exploring medical students' perceptions of mistreatment. *Acad Med*. 2014. 89(4): 608-617.

Goldszmidt M, Faden L, Dornan T, van Merriënboer J, Bordage G, Lingard L. Attending physician variability: a model of four supervisory styles. *Acad Med*. 2015 Nov;90(11):1541-6.

Karani R1, Fromme HB, Cayea D, Muller D, Schwartz A, Harris IB. How medical students learn from residents in the workplace: a qualitative study. *Acad Med*. 2014. Mar;89(3):490-6.

Phenomenology:

Mattsson JY, Arman M, Castren M, Forsner M. Meaning of caring in pediatric intensive care unit from the perspective of parents: A qualitative study. *J Child Health Care*. 2014. Dec;18(4):336-45.

Noome M, Dijkstra BM, van Leeuwen E, Vloet LC. Exploring family experiences of nursing aspects of End-of-life care in the ICU: A qualitative study. *Intensive Crit Care Nurs*. 2016. Feb 15. pii: S0964-3397(15)00116-0.

Bogetz A., Abramson E., Michelson C., Simpkin A., Li, S. Beyond Numbers: Building Your Skills in Qualitative Research. Association of Pediatric Program Directors (APPD) National Conference, New Orleans, 2016.