INTRODUCTION TO QUALITATIVE RESEARCH METHODS

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What is qualitative research?

• A broad approach encompassing many research methods
  • Systematic collection, organization and interpretation of textual information (also images/video)
  • Inductive approach to generating novel insights into phenomena that are difficult to quantify

• Not a single thing:
  • Techniques for data collection and analysis
  • Wide framework for conducting research

• Big Q and small q

"Not everything that can be counted, counts; not everything that counts can be counted."
- Albert Einstein
What can qualitative methods achieve?

• Generate comprehensive description of processes, mechanisms, or settings

• Characterize participant perspectives and experiences
What are the products of qualitative research?

• Recurrent themes or hypotheses
• Survey instrument measures
• Taxonomies
• Conceptual models (or theories)
Fundamentals of qualitative research: Meaning, not numbers

• Capturing some aspect of social or psychological life
• *Putting an organizing framework on the messiness of real life* (Braun & Clarke, 2013)
Fundamentals of qualitative research: Meaning, not numbers

Qualitative Approach:
- Inductive
- Depth, local meanings, generate hypotheses
- Natural Setting
- Purposeful Sampling
- Words, images; narrow but rich Data
- Iterative interpretation Data Analysis
- Personal involvement and partiality (subjectivity, reflexivity) Values

Quantitative Approach:
- Deductive
- Breadth, generalization, test hypotheses
- Experimental/Quasi-Experimental Setting
- Probabilistic Sampling
- Numbers; shallow but broad Data
- Statistical tests, models Data Analysis
- Detachment and impartiality (objectivity) Values

Mixed Methodology
Fundamentals of qualitative research: No single answer

• Telling one story among many that could be told about the data
• Doesn’t mean that the story is fictional
  • Plausible
  • Coherent
  • Grounded in the data
• Truth can be compelling without claiming to be *absolute*
Fundamentals of qualitative research: Context is important

- Data does not come "out of ether"
  - It is produced within contexts by participants who are located and come from specific contexts
- Contrast with positivist/quantitative ideal of obtaining „uncontaminated” data or knowledge, with all biases removed
- In qualitative research we recognize the subjectivity of the data we analyze and incorporate it in the analysis (instead of taking it as a bias to be removed)
Fundamentals of qualitative research: Underpinned by ontological and epistemological assumptions

• Ontology: What is the nature of reality?
• Epistemology: What is possible to know? How can we generate meaningful knowledge?

Relativism
„Reality” is dependant on the ways we come to know it

Critical Realism
A pre-social reality exists but we can only ever partially know it

Realism
A pre-social reality exists that we can access through research
Fundamentals of qualitative research: Underpinned by ontological and epistemological assumptions

- Silverman (2006): „I have lost count of the run of the mill qualitative research papers I have come across which find it necessary to define their work in terms of obscure philosophical positions ... In my view, you do not need to understand these terms in order to carry out good qualitative research. Indeed, if you try to understand them, my guess is that you will not emerge from the library for many years. ...If you have a simple approach that is working well for you, don’t try to dress up your work in fancy terms.”
Fundamentals of qualitative research: All sorts of data

- Production of data – by what we get participants to do
- Selection of data – from existing materials, naturally occurring data
- Rich and shallow data
  - Rich data are generally preferred
- Most important issue is that data serves the purpose of research
Fundamentals of qualitative research: Subjectivity and reflexivity

• Subjectivity
  • Researchers and participants bring their own histories, assumptions, values, perspectives, politics into the research
  • ...any knowledge produced is going to reflect that in some way (even if only minor)

• Reflexivity
  • Process of critically reflecting on the knowledge we produce and our role in producing this knowledge.
  • Functional reflexivity – critical attention to the way our research tools/methods may have influenced research
  • Personal reflexivity – making researcher visible as a part of research process
Exercise - Reflexivity

YOU ARE A RESEARCHER ABOUT TO CONDUCT AN INTERVIEW STUDY ABOUT PHD STUDENTS' EXPERIENCES WITH SCIENTIFIC MISCONDUCT.

BY YOURSELF (5-7 minutes):

- Identify at least 5 visible factors that may lead a participant to have presumptions about you.
- Identify at least 5 invisible factors (e.g. your assumptions about life, about people, about the topic...) that affect the way you conduct/analyze/interpret your research.

IN PAIRS (5-10 minutes; preferably someone you don't know so well):

- Briefly (2-3') talk about your experiences/opinions/knowledge with scientific misconduct.
- List 5-10 assumptions you would have about your partner which could influence the way you would respond to them if they were a researcher and you a participant in an interview study.
- Compare your notes and see similarities/differences in what you wrote about yourself and what your partner wrote about you.
Planning and designing qualitative research

When is qualitative approach needed?

- ...little is known or present understanding is inadequate
- ...making sense of complex situations or social processes
- ...learn from participants about their experiences (beliefs, motivations, opinions, practices...)
- ...construct a theory from data
- ...understand phenomena deeply and in detail
Planning and designing qualitative research

• A well formed question is key to good research

“To ask the 'right' question is far more important than to receive the answer. The solution of a problem lies in the understanding of the problem; the answer is not outside the problem, it is in the problem.”

— Jiddu Krishnamurti, The Flight of the Eagle
Planning and designing qualitative research

Conceptualizing a qualitative research question:
• Inductive, exploratory
• Frame as a question/aim, objective (no hypotheses to test)
• Careful focusing on a single idea/phenomenon/concept
Planning and designing qualitative research

Writing a research aim/question:
• Use a verb (e.g. to characterize, to describe, to understand)
• Identify the topic of interest
• Non-directional (neutral) language
• Define the sample and setting
• As precise as possible
Planning and designing qualitative research

Sample qualitative research aims/questions:

• To explore the views of women who received a leaflet summarizing the findings of the trial in pregnancy in which they had participated (Dixon-Woods et al., BMJ, 2006).

• To understand journal editors’ and publishers’ views on trial registration and publication bias (Wager & Williams, BMJ, 2013).

• To describe and classify the components of the burden of treatment for patients with chronic conditions from the patient’s perspective (Tran et al., BMC Medicine, 2015).
Planning and designing qualitative research

Sample qualitative research aims/questions:

• To understand the knowledge, attitudes, beliefs, preferences and barriers regarding abstinence among drug addicts.

• To characterize barriers to total abstinence among male heroin users who are currently enrolled into indefinite methadone treatment program led by NGO “Susret” in Split, Croatia.
Planning and designing qualitative research

Selecting a sample

• Qualitative research typically involves purposeful sampling
  • *Selection for in-depth study of typical, atypical, or, in some way, exemplary “information-rich cases”* (Patton, 1990)
  • Determine key informants (individuals who have knowledge of or experience with phenomenon of interest)
  • Breadth, not representativeness
  • Sample size depends on complexity of inquiry (cannot be clearly determined in advance!)
  • Sample size is determined by theoretical saturation (a point at which no new concepts emerge from the data)
Qualitative research methods

- Common approaches to data collection

<table>
<thead>
<tr>
<th>APPROACH</th>
<th>PURPOSE/APPLICATION</th>
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<tbody>
<tr>
<td>Interviews</td>
<td>Explore individual experiences/perceptions/practices in rich detail</td>
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<tr>
<td>Focus groups</td>
<td>Generate insights into shared experiences and social norms through group discussion</td>
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<tr>
<td>Observation</td>
<td>Learn about behaviors in natural setting; learn about cultural aspects of settings or contexts</td>
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<tr>
<td>Textual data</td>
<td>Various (surveys, stories, diaries, documents...)</td>
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Qualitative research methods: Interviews

• Conversation with a purpose

• Useful for:
  • Individual perspectives and experiences
  • Sensitive topics
  • Situations where there is perceived danger of reprisal
  • Topics that cannot be investigated through surveys
  • Gathering in-depth information about a topic
Qualitative research methods: Focus groups

• Generating narrative data in a focused discussion

• Group dynamics:
  • Widens the range of responses (different perspectives and views on common experience)
  • Activates forgotten details
  • Releases inhibitions
Qualitative research methods: Focus groups

• Useful for:
  • Characterizing social and cultural norms
  • Sharing and comparing (Morgan)
  • Revealing how people talk about an issue
  • Exploring sensitive topics
Qualitative research methods: Observation

- Enable researcher to learn what is taken for granted in a situation and to discover what is going on by watching and listening.

- Techniques differ primarily in the visibility and involvement of researcher in the setting:
  - Participant observation
  - Nonparticipant observation

- Field notes (also photographs, video)
Qualitative research methods: Textual data

• Administrative documents
• Qualitative surveys
• Vignettes
• Story completion tasks
• Diaries
• ...
Qualitative research methods: Qualitative survey

• Quick and cheap
• Lots of data
• Sensitive topics (privacy and anonymity)
• Fewer ethical concerns
Qualitative research methods: Interviews

• Interview guide:
  • Framework for the interviewer
  • Main questions and probes
  • Open and non-directive questions

• Interviewer may diverge from the guide and pursue an unexpected but relevant idea offered by interviewee

• Interviewer may reword, add, drop or change sequence of questions
Qualitative research methods: Interviews

- Interview guide – things to consider
  - Opening and closing
  - Sequencing of questions
  - Constructing and wording questions
  - Prompts and probes
  - Research questions are not interview questions
  - Social desirability
Qualitative research methods: Interviews

• Interview questions (Kvale & Brinkman, 2013)
  • Thematic dimension
    • ...producing knowledge (the "What")
    • ...theoretical conception of research topic
    • ...subsequent analysis
  • Dynamic dimension
    • ...interpersonal relationship (the "How")
Qualitative research methods: Interviews

• Probes:
  • Silent – Nod slowly, tilt head
  • Echo – Repeat the last statement and ask respondent to continue
  • Neutral – Encouraging; "I see", "uh-huh", minimal nonverbal signals
  • Direct – "Tell me more", "What do you do then?" ...(very common, very useful)
  • Phased assertion – Imply you already know something and encourage respondent to speak up
  • Detail – who, where, what, when, how
  • Clarifying – "You said X, please describe what you meant by that"
Qualitative research methods:
Exercise - Asking questions

IN PAIRS (not someone you travelled to Liverpool with):

• Find out as many details as you can about the other person's trip to Liverpool – IMPORTANT: YOU CAN ONLY ASK QUESTIONS THAT WILL GIVE YOU A YES/NO ANSWER

• Change and do the same but with OPEN QUESTIONS (HOW, WHEN, WHAT, WHERE, WHO)
Qualitative research methods: Interviews

• Conducting the interview
  • Establish good rapport (!)
  • Participants will speak candidly only if they:
    • ...feel comfortable in the space
    • ...trust the interviewer
    • ...feel secure about confidentiality
    • ...believe interviewer is genuinely interested in what they have to say
    • ...do not feel judged
Qualitative research methods: Interviews

• Conducting the interview – things to avoid
  • Influencing responses by asking leading questions on conveying own view (implicitly or explicitly)
  • Asking “Why?”
  • Asking about other people (e.g. “How do you coworkers perceive...?”)
  • Moving too quickly from one topic to another
  • Interrupting the interviewee
Qualitative research methods: Interviews

• General tips for good interview
  • Know your interview guide and potential probes
  • Rehearse your introduction
  • Be aware of power differences
  • Be a qualitative researcher, leave temporarily your other roles
  • Speaking carefully
  • Comfortable with silence (!)
Qualitative research methods:
Exercise – Developing an interview topic guide

• In groups of 3 develop an interview topic guide that may help you with answering research question:

  What research practices do PhD students in biomedical disciplines perceive as questionable?
Qualitative research methods:
Exercise – Conducting an interview

• Decide roles: interviewer, interviewee; observer
• Do the interview (observer records the video) – 15’
• Watch the video and write down what you noticed – what was good, what can be improved
• Share with the whole class
Qualitative research methods: Qualitative data analysis – common approaches

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<tr>
<th>Approach</th>
<th>Description</th>
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<tr>
<td>Thematic analysis</td>
<td>Identifying themes and patterns of meaning across a dataset in relation to research question</td>
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<tr>
<td>Grounded theory</td>
<td>Questions about social and/or psychological processes; focus on building theory from data</td>
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<tr>
<td>Interpretative phenomenological analysis</td>
<td>How individuals make sense of their world (life-world)? Seeks insights to the meanings that events and experiences hold for people.</td>
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<tr>
<td>Discourse analysis</td>
<td>How language is used? What is said and why it might be said?</td>
</tr>
<tr>
<td>Narrative analysis</td>
<td>How individuals make meanings using stories. Seeks understanding of the unique perspective brought by individuals to make sense of their external and internal world</td>
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Qualitative research methods: Qualitative data analysis

- Iterative process of individual and group level review and interpretation of narrative data
Qualitative research methods: Qualitative data analysis

• Familiarization with the data
  • Reading, transcribing, initial notes-to-self
• Should start parallel with data collection
Qualitative research methods: Qualitative data analysis - Codes

• “A code in qualitative inquiry is a word or a short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data.” (Saldaña, 2016)

• Coding is a process of organizing data into chunks that are alike, i.e. that share properties meaningful for our analysis
Qualitative research methods: Qualitative data analysis - Codes

- **First cycle coding**
  - Initial coding of data – e.g. open coding (term from GT – identifying concepts that seem to fit the data)
  - Fairly simple and direct

- **Second cycle coding**
  - More analytic skills required (e.g. classifying, prioritizing, integrating, synthesizing, conceptualizing, theory building)
Qualitative research methods:
Qualitative data analysis – Code structure

• Code structure is a compilation of emerging codes
  • Includes definitions/descriptions of each code (usually also illustrative quotes)
• Guidance for using the codes
• Code structure changes (evolves) throughout the analysis
Qualitative research methods: Qualitative data analysis

Example of the process:

Combine concepts and themes to generate your own explanation of your data

Create initial codes

Read transcript freely
Make notes (memos)

Create initial codes
Describe code properties

Code 2-3 transcripts, Negotiate, revise

Code 2-3 transcripts, Negotiate, revise

Combine concepts and themes to generate your own explanation of your data
Qualitative research methods: Developing a code structure – General strategies

• Purely inductive (grounded method)
  • Participant experiences drive analysis
  • Develop codes from scratch (*de novo*) line by line
  • May employ constant comparisons
Qualitative research methods: Developing a code structure – General strategies

• Start list method
  • Preliminary organizing framework
  • Partially deductive
  • Initial codes:
    • Researcher expertise
    • Existing literature about the topic of inquiry
    • Pilot studies
Qualitative research methods: 
Developing a code structure – General strategies

• Integrated approach
  • Begin with broad code types
  • Develop sub-codes from the data

• Retains benefits of inductive coding

• Acknowledges certain code types are useful in developing certain froms of output
Qualitative research methods: Practical exercise