

Qualitative research methods

Professor Aslak Steinsbekk
 Department of Public Health and Nursing
aslak.steinsbekk@ntnu.no

Aim of presentation

- To be able to write a protocol for qualitative methods:
- Basics of qualitative research methods
 - What is it
 - How to do it
- The protocol
 - Design
 - Informants
 - Data sampling
 - Analysis

Literature

- Qualitative methods
 - Albine Moser & Irene Korstjens (2017) Series: Practical guidance to qualitative research. Part 1: Introduction, European Journal of General Practice, 23:1, 271-273, DOI: 10.1080/13814788.2017.1375093
 - Irene Korstjens & Albine Moser (2017) Series: Practical guidance to qualitative research. Part 2: Context, research questions and designs, European Journal of General Practice, 23:1, 274-279, DOI: 10.1080/13814788.2017.1375090
 - Albine Moser & Irene Korstjens (2018) Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis, European Journal of General Practice, 24:1, 9-18, DOI: 10.1080/13814788.2017.1375091
 - Irene Korstjens & Albine Moser (2018) Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing, European Journal of General Practice, 24:1, 120-124, DOI: 10.1080/13814788.2017.1375092
- Check list
 - Critical Appraisal Skills Programme (2018). CASP Qualitative Checklist. [online]. Available at: <https://casp-uk.net/casp-tools-checklists/>
 - Norsk: <http://www.helsebiblioteket.no/kunnskapsbasert-praksis/verktoy>
- Norwegian book
 - Kirsti Malterud (2017). Kvalitative metoder i medisinsk forskning (4.utgave). Oslo: Universitetsforlaget. 256 sider. ISBN: 9788215028286

Typical result (Interview)

- Aim: To identify and explore parents' concerns when young children become acutely ill.

Results:
 Parents became more concerned if their child was uncomfortable— for example, hurting from coughing or flushing from fever.
"I hate it when you see them like that, they're just burning up, lying there crying and not eating" (Parent 11)

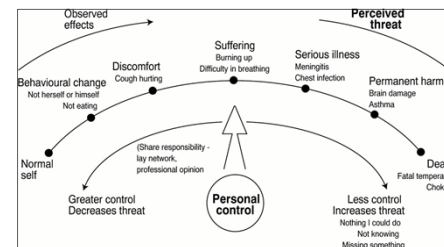


Fig 1. Interaction of personal control and perceived threat

Kai J. What worries parents when their preschool children are acutely ill, and why: a qualitative study. BMJ 1996;313:983 <https://www.ncbi.nlm.nih.gov/pubmed/8892420>



Typical result (observation)

- Aim: to study explicitly the ways in which primary care practitioners—general practitioners (GPs) and practice nurses—use evidence in their day to day decisions about the management of patients

Results:

- We found that the individual practitioners did not go through the steps that are traditionally associated with the linear-rational model of evidence based health care —not once in the whole time we were observing them.
- Neither while we observed them did they read the many clinical guidelines available to them in paper form or electronically, except to point to one of the laminated guidelines on the wall in order to explain something to a patient or to us.

Gabbay J, le May A. Evidence based guidelines or collectively constructed "mindlines?" Ethnographic study of knowledge management in primary care. *BMJ* 2004;329:1013. <https://www.ncbi.nlm.nih.gov/pubmed/15514317>

5



Can you do it?

- Yes, of course!
- It is what you are doing right now
- (listening to a guy talking, and interpreting what he is talking about. You have practiced continuously since you were borne)

6



Research in general



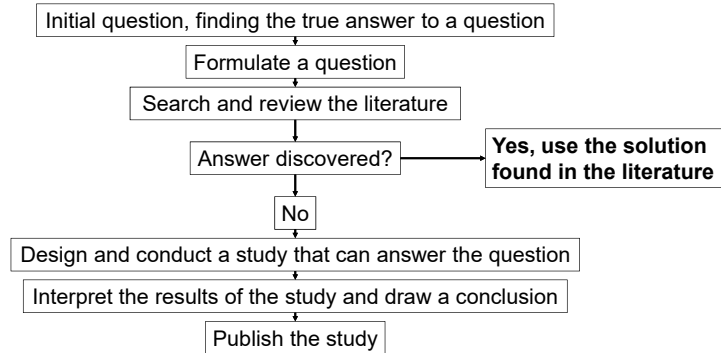
Research – definition

- A **systematic investigation**, including research development, testing, and evaluation, designed to develop or **contribute to generalizable knowledge**
- Norsk: en systematisk undersøkelse med formål å utvikle eller bidra til generaliserbar (allmenngyldig) kunnskap

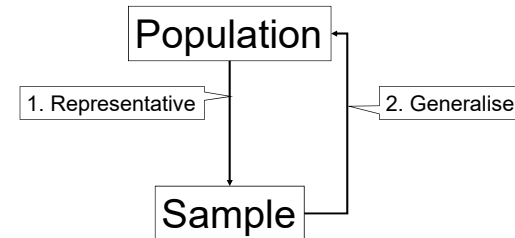
Paragraph (I) in §46.102 Definitions for purposes of this policy. In the 2018 Requirements of US Department of Health and Human Services: <https://www.ecfr.gov/cgi-bin/retrieveECFR?pp=8&SID=83cd09e1c0f5c6937cd9d7513160fc3f8&pid=20180719&n=prt45.1.46&r=PART&ty=HTML>

8

Overall research process

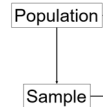


From study to generalisable knowledge (What is research?)



Must ensure that the sample in the study is representative of the population, to be able to generalise (infer) back to the population

But what is the population?

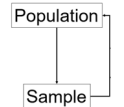


- Population: Everything of something. The things we want to say something about
- Need to be defined so that we know if the sample in the study is representative of the population

Defined by two questions:

1. Who do we study?
 - Same for quantitative and qualitative
2. What do we study?
 - Experiences (“why?” and “how?”): Qualitative studies
 - Numbers (“what?” “how much?” and “why?”): Quantitative studies

Population qualitative studies



- Population = **The experience** of a defined group of people
- I.e. the population is about peoples experiences
 - It is not about the number of people with experiences
 - It is not about the number of experiences
- The ultimate aim of qualitative studies is to identify the population of experiences of a defined group
- Consequently, the sample must represent this population = the experiences

PUPULATION OF EXPERIENCES



Approaches to research

- | | |
|--|--|
| <p>The miner</p> <ul style="list-style-type: none"> • Digs inwards • Uncover the purest most valuable metal • The objective real data or the subjective authentic meaning | <p>The traveler</p> <ul style="list-style-type: none"> • Journey to foreign places • Want to experience how different people lives • “Conversation” Latin for “wandering together with” • Notices the many ways of understanding the world |
| <ul style="list-style-type: none"> • Positivist | <ul style="list-style-type: none"> • Constructivist |



What exists, and how can we learn about it?

- Two terms that is used when discussing paradigm, worldview, philosophy of science etc.
- **Ontology:** The philosophical discussion about being (what exists, what is reality)
 - What can we have knowledge about?
 - Is reality real or is it something humans invents?
- **Epistemology:** The philosophical discussion about what knowledge is (what is truth, beliefs and justification)
 - how do we know what we know?
 - Can we know something, or is it just a belief?

14



Two different scientific positions (endpoints of a continuum)

- **Positivism:** There is an objective reality
 - Ontology: There is an reality. Epistemology: We can get objective knowledge about it.
 - If the right method is used, the objective truth will be found
 - Through systematic studies and often experiments, it is possible to describe and explain the objective reality
- **Constructivism:** Reality is constructed by humans
 - Ontology: Reality is constructed. Epistemology: We can get subjective knowledge about it (through how humans perceive it).
 - The “truth” exists in the human mind, to find it we must investigate how human construct their reality
 - Through systematic studies and often observation, it is possible to describe and explain how humans constructs the world

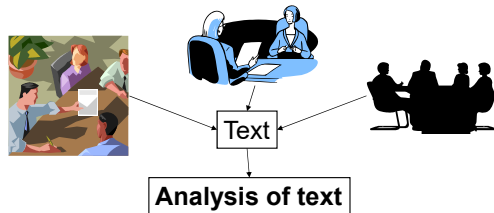
15



Qualitative research methods

How to do it / what to include in the protocol

What is it?



Analysis of text from:
Interview, documents, pictures, observation etc.

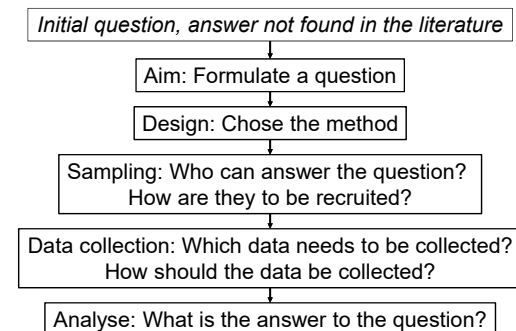
Definition

- Qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of **the meanings people bring to them** (Denzin 1994).
- Qualitative research aims to provide in-depth insights and understanding
- Practical definition: **Collection and analysis of text**
 - how people experience something (what they say in an interview / write in a document), and / or
 - behave in a specific situation (what they are observed to do)

Major weakness and strength

- Qualitative study is about how people perceive their world and how they presents themselves
- Weakness: What people say they do/did can be different from what they actually do/did.
- Strength: Gives knowledge about the meaning (rationalisation) people give to their experiences. Ensures that peoples voices are heard (not only based on a researchers pre-categorisation).

Details of methods qualitative study (headings in protocol)





What is it used for?

- Investigate the quality (the quality of the fabric, not the weight or price)
- Explore an area not previously researched
- Understanding of meaning
- Investigate human processes
- Make new hypothesis
- Make new concepts

21



Buzzing- Aim

- Talk to the next person
- Write down an aim of a qualitative study (one each)
- Be concrete; "How do immigrant women experience gynecological consultations with male Norwegian doctors?"
- Avoid questions that can be answered with Yes/No or numbers, or that indicates causal relationship

22



The "right" words

"Right"

- To **explore** how men and women **experience**
- How do patients with cancer **experience** the consultation

"Wrong"

- Is there a difference in how men and women experience
- Are patients with cancer satisfied with the consultation



Design

- Be descriptive: Qualitative study with individual face to face interviews and observation
- In practice, OK if facilitates collection of data through
- Interview (peoples experiences)
 - Observation (peoples behaviour)
 - Documents (peoples writings)

(Sometimes used specific "names" of qualitative methods)

24

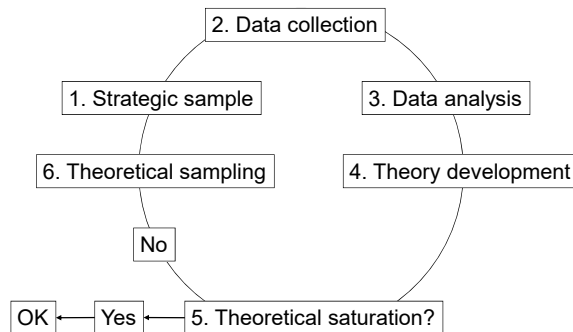
Informants

- Start with who / what you want to say something about
- **Main question: Who do I need to include in the study to represent the population**
 - Who have knowledge about the study question?
- Inclusion / exclusion criteria (eligibility criteria)
 - Not frequently used as terms in publications, should be used more

Recruitment (sampling)

- (In practice, start with those most easily accessible, have ongoing analysis to inform you about whom to recruit next)
- Snowball: Ask those you have recruited to suggest others
- Purposeful/Strategic: You decide whom to include
- Convenience: Those you could get hold of
- Theoretical. See next slide
- Aim is usually to maximise variation

Sampling - Grounded theory



Buzzing

- Talk to the next person
- Think about the aim you wrote down
- **How would you recruit informants to maximise variation in the sample?**
- E.g.: First recruit immigrant women how visits a male physician and the ask them and other immigrant women for other possible informants, especially those not going to the GP (snowball)



N=?

- Main rule: Recruit until saturation = the last informants do not add any substantial new information
- In practice: +/- 15 informants
- OBS! Maximise variation – informants with different gender, age, professions, experiences, disease stages etc.
- Warning sign: Everyone says the same

29



Data collection

1. How to collect the data
 2. Which data to collect
- The important part is **the quality of the data** that actually were collected
 - Is it rich and deep enough?
 - Best approach: Collect data – analyse – collect more data – analyse – etc.

30



How to collect data?

- Types of data collection (interview, observation etc)
 - Individual interview – larger variation
 - Focus group – the “essence”
 - Participant / non-participant observation – what people do
- Type of interview
 - Open – informants speaks freely
 - **Semi structured** - informants speaks freely and the interviewer introduces themes not talked about
 - Structured – Informants asks questions

31



Questionnaire vs. Open interview

Questionnaire

- Answers dependent of questions and options
- Mechanical execution
- Investigates areas we have knowledge about
- Connects isolated and defined variables

Open interview

- Answer depends on the responder
- Situational execution
- Investigates the unknown
- Discover new connections

Use qualitative methods to identify topics to be included in a questionnaire



Which data to collect Interview / observation guide

- What the informants will be asked about
- Describe development
 - To ensure that the informants discussed the same themes, a semistructured interview guide was formulated. Based on a **literature review** and discussions with experienced researchers, the following themes were formulated in the interview guide to operationalize the core research question:
- Must be well prepared
- It is allowed to change the guide during the data collection

33



Example Interview guide

- This is a study about your experience with the treatment. Could you please tell me about it?
 - How did you experienced the **waiting time** before you started your treatment?
 - How was the **process of choosing** type of treatment?
 - How was you **involved** in your treatment?

34



It is allowed to change during data collection

- The data collection plan needs to be broadly defined and open during data collection
 - This is due to exploring a new area, not knowing what one will find
- Thus, adjustment in the light of information learned along the way of the data collection, shows a commendable sensitivity to the richness and variability of the subject matter
 - This flexibility must not slide into sloppiness, where the researcher ceases to be clear about what it is (s)he is investigating

35

Trisha Greenhalgh, Rod Taylor. How to read a paper: Papers that go beyond numbers (qualitative research)
BMJ 1997;315:740 doi: <https://doi.org/10.1136/bmj.315.7110.740>



Buzzing

- Talk to the next person
- Write down the questions or themes you will ask the informants to get an answer to your research question

36

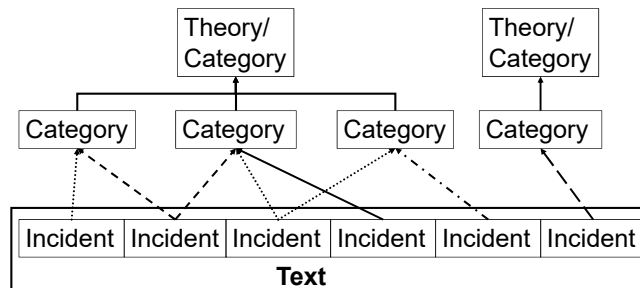
What is analysis?

- The step between the story the informants tells the researcher and the story the researcher writes in the article
- To deconstruct and reconstruct
 - Take the data set (transcripts), divide it into smaller pieces (meaning units, deconstruct) and put the pieces together again in a new order that still represents the data set (reconstruct)
- Describe in detail what you are going to do.

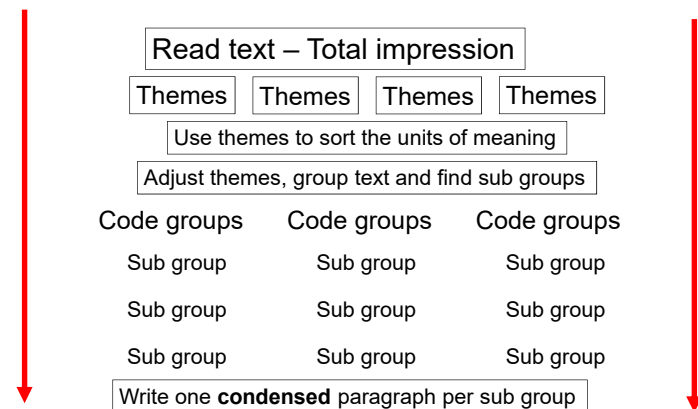
Analysis

- Many different names for different approaches
 - Thematic analysis, content analysis, interpretive phenomenological analysis, narrative analysis etc. etc.
 - Don't look at the name of the analysis, **look at what was done**
- There are no specific ways of doing the analysis for a specific subject field
BUT everyone does the same
- **Read the data material (text) and sort it into themes and sub-themes to make sense of it and present it**

Analyse Grounded theory



Analyse: Systematic text condensation





Two main approaches to analysis

- Top down
 - Start with the birds perspective, identify main themes
 - Then code the details in the text into the themes
- Bottom up
 - Start to code the details in the text
 - Group the codes into themes
- **SECRET: everyone does the same**
 - You can not stop thinking about the details looking from the birds perspective
 - You can not stop thinking about the birds perspective looking at the details

41



To learn more – read articles

Find articles using qualitative methods ("Qualitative Research"[Mesh] i www.pubmed.gov) in your area and identify:

1. Which words are used in the aim?
2. What type of qualitative methods were used?
3. Who were included and how were they recruited?
4. Which data was collected and how?
5. How are the data analysed?
6. Which literature were used as references for the methods and analysis?

42



Summary

- Qualitative methods is the best method to explore human experiences
 - An important method to ensure that human experiences becomes part of the scientific literature
- Different methodological approaches than quantitative methods, but builds on the same principles
- A good qualitative study identifies the **POPULATION OF EXPERIENCES**

43



Examples of books (nor/eng)

- Kirsti Malterud (2017). Kvalitative metoder i medisinsk forskning (4. utgave). Oslo: Universitetsforlaget. 256 sider. ISBN: 9788215028286.
 - Artikkel på engelsk: Malterud K. Systematic text condensation: a strategy for qualitative analysis. Scand J Public Health. 2012 Dec;40(8):795-805. doi: 10.1177/1403494812465030.
- Kirsti Malterud (2012). Fokusgrupper som forskningsmetode for medisin og helsefag. Oslo: Universitetsforlaget. ISBN: 9788215020464.
- Svend Brinkmann, Steinar Kvale (2014). InterViews: Learning the craft of qualitative research interviewing (3rd edition). Los Angeles, Calif.: SAGE Publications. 424 pages. ISBN: 9781452275727.
 - Finnes også på norsk
- Richard A. Krueger, Mary Anne Casey. Focus Groups: A Practical Guide for Applied Research (5th ed), SAGE Publications, Inc. 280 pages. ISBN-10: 1483365247. ISBN-13: 978-1483365244.

44