



# Qualitative research methods

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# Overview of the lecture

- What are qualitative research methods?
- 7 key approaches to qualitative methods
- Methods for data collection
- Analysis
- Rigour
- Conclusions

# What are qualitative research methods?

Qualitative research answers questions that **seek understanding** and **meaning** in **complex situations** where **little is already known**.

Research questions tend to be explorative, seeking to identify and understand more about a phenomenon and may ask questions that start with: how and what

For example,

**How** do doctors decide on their future career?

**What** influences doctors to choose a career in family medicine?

# Approaches to qualitative research

**The research questions asked can often suggest which approach would be the most suitable**

- Case study
  - Narrative
  - Grounded theory
  - Action research
  - Phenomenology
  - Ethnography
  - Hermeneutics
- Lingard and Kennedy (2010) Qualitative Research in Medical Education, in Understanding Medical Education 323-335.

# Case study



This approach is suitable for a study about one group  
e.g. a hospital, medical school or team  
– can have several case studies and compare them

# Case study

**Case study originates from** the study of a particular group within a set boundary e.g. doctors in a particular team, the study of a particular programme or comparison of several different case studies. <sup>1</sup>

**Recent example** - Study comparing medical student preparedness in 3 medical schools<sup>2</sup>

**The approach involves** triangulation of data – collection of data from different sources or using different methods.

**Data collection** is focused on a set group, with a defined boundary, can use a range of approaches.

**Analysis** is focused on the case study or comparing one case with another.

<sup>1</sup> Yin R K (2014) Case Study Research: Design and Methods, SAGE.

<sup>2</sup> Illing J, Morrow G et al (2008). How prepared are medical graduates to begin practice? Final summary and conclusions for the GMC Education Committee, September 2008. (see <https://www.dur.ac.uk/school.health/cmer/>)

# Narrative research



This approach is suited to researching experiences through time, such as chronic illness or career development.

# Narrative research



**Narrative research originates** from the ancient art of story telling  
method of communication and interpretation of human experience <sup>1</sup>

**Recent examples in medical education** have been used to teach  
medical students more about communication skills and empathy <sup>2</sup>

**The approach involves** identifying key informants to tell their story

**Data collection** involves in-depth interviewing

**Analysis** seeks meaning within the context of the story

1. Bleakley (2005) Stories as data, data as stories: making sense of narrative inquiry in clinical education. *Medical Education* .39:534-40.
2. Pullman et al (2005) Narrative means to humanistic ends. *Teaching & Learning in Medicine* 17:279-84



# Grounded theory



This approach is suitable when attempting to develop theory that explains the data

# Grounded theory



**Grounded theory originates** from Strauss and Glaser, who aimed to develop a qualitative approach that would match the rigour of quantitative methods. <sup>1</sup>

**The approach:** explain data, generate theory and create hypothesis.

**Recent examples:** a study which identified that learning on the job was important for preparedness to start work as a doctor. <sup>2</sup>

**An iterative approach,** data collection and early analysis, to inform the next stage of data collection, so ideas can be tested and developed from the start.

**Data collection** involves sampling purposively (deliberate selecting) for further testing.

**Analysis** is on-going and uses 'constant comparison' to compare findings.

1 Glaser B and Strauss A (1967) *The Discovery of Grounded Theory: strategies for qualitative research*. Aldine Pub Co., Chicago, IL.

2. Hing, J et al. (2013). Perceptions of UK medical graduates' preparedness for practice: A multi-centre qualitative study reflecting the importance of learning on the job. *BMC Medical Education* 13(34).

# Action Research



Helpful if the plan is to use research to identify a potential solution to a problem which can then be implemented, then assessed, then repeated (cycle).

# Action Research

**Action research originates from the work of Lewin (1890-1947).** The aim was to speed up the time from research completion to implementation of findings.

**Recent example** to explore gender equality in health internationally<sup>1</sup>

**The approach involves** cycles of planning the research, conducting the study, and acting or implementing the findings

**Data collection can involve** a range of both qualitative and quantitative approaches

**Analysis** involves the plan to implement findings, evaluate, and cycling round into more research as needed.



<sup>1</sup>Tolhurst R. et al . (2012) Intersectionality and gender mainstreaming in international health: Using a feminist participatory action research process to analyse voices and debates from the global south and north. *Soc Sci Med.* 74: 1825–1832.

# Phenomenology



# Phenomenology

**Phenomenology originates from Husserl (1970) and Schutz (1964, 1970).<sup>1</sup>**

Seeks understanding from the perspective of the person or group experiencing the phenomena.

**A recent example** is a study on medical students' understanding of empathy<sup>2</sup>

**The approach involves** bracketing or excluding the researchers' preconceptions to ensure focus is on the lived experiences of those who are being studied.

**Data collection involves** in-depth exploration of the experiences of those being studied

**Analysis** involves focusing on experiences and meaning

1 Green & Thorogood (2009) *Qualitative methods for health research*, Sage.

2 Tavakol S, Dennick R, Tavakol M. Medical students' understanding of empathy: a phenomenological study. *Med Ed* 2012; 46: 306–316



# Ethnography



# Ethnography

**Ethnography originates from anthropology**; traditionally the approach is used to observe, interpret and seek to understand a foreign culture, typically an ancient tribe. <sup>1</sup>

**The approach is now used in cultures closer to home**, for example, the study of medical school culture <sup>2</sup> and the operating room <sup>3</sup>

**The approach involves long-term observation** in the study setting e.g. the hospital ward or operating theatre.

**Data collection** can form observational notes and interviews.

**Analysis is focused on understanding** the culture and explaining the observed behaviours

1. Hammersley M and Atkinson P (1995) What is ethnography? *Ethnography: principles in practice*. Routledge, London
2. Becker H, Geer B, Hughes E and Strauss A (1961) The boys in White: student culture in medical school. University of Chicago Press, Chicago, IL
3. Lingard L, Espin S, Whyte S, Regehr G, Baker GR, Reznick R et al. (2004) Communication failures in the operating room: an observational classification of types and effects. *Quality and Safety in Health Care*. 13: 330-4



# Hermeneutics



The approach, which historically focused on written the written word, could be used for the study of text

# Hermeneutics

**Hermeneutics originates from the study of biblical texts<sup>1</sup>.**

**An example** is a study in which newly educated physicians narrated their learning experiences while treating suicidal patients. The interview texts were interpreted using a phenomenological-hermeneutical method<sup>2</sup>.

**The approach** involves focus on the lived experience of the participants to understand their political, historical and socio-cultural context

**Data collection** involves selection of relevant text but also generation of qualitative data from e.g. surveys, focus groups or interview data.

**Analysis** involves cycles of comparison of individual sections of texts with the meaning of the whole text.

<sup>1</sup>Ricoeur 1974. The conflict of interpretations: essays in hermeneutics. North Western University Press, Evanston, IL.

<sup>2</sup> Høifødt et al 2007 A qualitative study of the learning processes in young physicians treating suicidal patients: from insecurity to personal pattern knowledge and self-confidence *BMC Medical Education*, 7:21

# Methods for data collection and analysis



# Methods for data collection and analysis

## Choosing the right type of tool for data collection

**Interviews** – provide **individual data** about **personal experiences**.

E.g. interviews about early experiences of starting work as a junior doctor, highlight individual differences.

**Focus groups** – enable in-depth **discussion** about experiences and views. At one time gain a range of views on a topic – gain breadth of view.

**Observation** – enables real life observation of behaviours and communication, e.g. measuring work intensity

**Textual analysis** – provides information about how something is experienced e.g. Text in reflective diaries may show awareness of issues related to professionalism.



# Interviews

- **In-depth interview** – enables a detailed exploration of a topic.
- **Semi-structured format** – set questions are used for all respondents, interviewer probes for more information to understand the relevant information.
- **Open ended questions** - there are no set or pre-coded responses.
- **Interviews are normally recorded** with permission and consent.
- **The recordings of interviews** are normally transcribed.
- The transcriptions are used as the text for analysis.
- **Transcriptions can be coded** using software e.g. NVivo.
- **Strengths:** provides detailed data from each respondent.  
Provides information about process and context.
- **Weakness:** relies on the memory - may be inaccurate, needs neutral questions, interviewer should be independent.



# Example in interview questions

## Example: Research question:

What are the barriers of doing clinical research for women in Japan?



## Interview questions:

1. Can you tell me about your early career plans?

*(Probe for details about views on doing clinical research)*

Did you ever consider doing clinical research? *(probe for information about what or who encouraged or discouraged this)*

2. What do you think influenced your choice of career?

*(Probe for barriers that hindered progression and enablers that supported development)*

3. What or who supported the development of your career?

4. Were there any barriers to your career development?

# Focus groups

- Focus groups normally have **3-12 participants**.
- **Are facilitated** by 1-2 researchers to guide discussion.
- Facilitator makes **notes and observations** about the group behaviours.
- **Semi-structured format** – set questions are used to start discussion, facilitator probes for more information to understand the relevant information and invites others to comment.
- **Open ended questions** - there are no set or pre-coded responses.
- **Focus groups are normally recorded** with permission and consent.
- **The recordings** of focus groups are normally **transcribed**.
- The transcriptions are used as the **text for analysis**.
- **Transcriptions are analysed and coded**, often using software e.g. NVivo.
- **Strengths:** provide access to more respondents at one time, provide a range of views that can be discussed, agreed on or challenged.
- **Weaknesses:** need to avoid the dominant voice and encourage others to contribute, not suited to personal or sensitive topics.



# Focus group topic guide

## Research question:

1. What are the barriers of doing clinical research for women in Japan?  
*(Probe for information about gender differences, explore range of views)*
2. Are there different expectations for men and women at work?  
*(Probe for origins of expectations, explore range of views)*
3. Does anything support your development at work?  
*(Probe for positives and negatives, any consensus?)*
4. Are certain people invited to do clinical research?  
*(Probe for range of views, explore consensus and disagreement)*





# Observation



- **Observe what participants do:** not what they think they do.
- The researcher **observes and makes notes** about behaviours and communications.
- **Can be recorded**, but need consent from everyone.
- **Participant or non-participant observer:** the researcher will need to decide if they are completely a non-participant passive observer or whether they also have a role in the group as well as observer, hence are also participants.
- **Strengths:** the observer sees everything that happens - not dependent on memory.
- **Weaknesses:** the observer may change the behaviour of the group. This can be reduced by spending a longer period observing the group or not sharing the true focus of the study -?ethics.
- The observers may miss or not pay attention to important issues.

# Observations at a meeting



## Observation notes

Context: Senior team meeting

Male professor invites comment on the search for a new head of school. He has clearly asked people within the group (but not the female professor).

The six men comment on the problem and make suggestions, no-one suggests a female head of school.

The senior professor suggests looking outside the group for an applicant.

## Reflective notes

–researcher comments

Group are silent, no-one expresses interest in wanting the post.

No-one suggests the female professor.

She is also silent.  
Why is the female professor not asked?

# Texts as data



- **A range of texts** are available for analysis  
e.g. Text used in examinations, staff appraisals and reflections reports, policy documents – can also include images and videos.
- **Strengths:** Many documents already exist,  
less need to create texts,  
not influenced by the research process
- **Weaknesses:** The texts do not allow probing for information that is not there.  
It does not facilitate the testing of ideas by asking questions iteratively.

# Textual analysis



**Charter for women in science**  
Recognising commitment to advancing women's careers in STEMM academia

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## Bronze

### Bronze Award holders:

- Demonstrate particular challenges and plan activities for the future.
- Use quantitative and qualitative assessment to identify challenges and opportunities.
- Have a plan that builds on this assessment, and lessons from any activities already in place.

## Silver

### Silver Award holders:

- Demonstrate particular challenges and plan activities for the future.
- Demonstrate that action has been taken in response to previously identified challenges.
- Demonstrate the impact of the actions implemented.

## Gold

### Gold Award holders:

- Demonstrate a substantial and well-established activity and achievement record in working towards equality in career progression in STEMM.
- Show initiative to increase numbers of women students.
- Demonstrate beacon activities in gender equality to the wider community.

Identify problem  
Plan action

Show progress  
Show improvement

Significant achievements

# Data analysis



# Data analysis

**Analysis** individually or a team activity

Involves: reading, reflection, consideration of meaning



**Coding of data:** sorting, organising data into themes or categories

**Data is coded into a range of themes**, also by context, type of respondent

E.g. *“We were not prepared for any type of ward work”*

Theme: ward work, (Warwick Medical School, F1, first interview)

Analytic theme, not mentioned by respondent but explained the data:  
lack of working on-the-job, lack of learning from being on placement

# Thematic analysis

## Types of thematic analysis:

- Content analysis
- Constant comparison



## Identify instances in the data that are similar

- The concept develops as more instances are identified
- The relationship between themes and concepts can be explored as more data is analysed.
- More analysis supports greater description of the concepts and interpretation and theory development can be explored.

# Discourse analysis

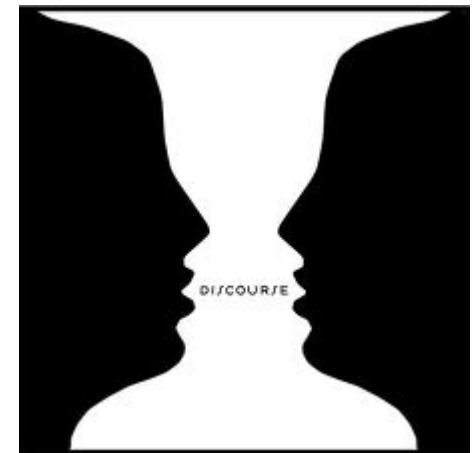
**Discourse is defined as:** ‘socially situated language’

Discourse analysis **focuses analysis at the level of language.**

The **aim here is show another level of meaning** by focusing on language.

**A range of approaches within discourse analysis:**

- Linguistics } focus is on
- Conversational analysis } social language
  
- Sociolinguistics } focus is on talk as
- Critical discourse analysis } evidence about social processes.



**Example:** Critical discourse analysis could be used to examine talk at meetings with male and female colleagues focused on promotion issues.



# Interpretation

## The final stage of analysis is interpretation

Finding the central meaning in the data.

- Without interpretation the research ends with themes.
- Interpretation is needed to explain and exploit the potential of qualitative data.



## The end stage of interpretation varies depending on approach taken

For example:

- **In phenomenology:** the goal is rich description of the phenomenon.
- **In Grounded theory:** the goal is to identify a theoretical explanation.
- **Action research:** seeks to implement the findings
- Other approaches may seek an end point that empowers the respondents – (feminist)



# Rigour (Trustworthiness)

**Sample :** Appropriate sample – range of views, sample size, data saturation

**Methods:** can indicate sample number and process of recruiting sample  
e.g. case study, phenomenology could be a single case. Theoretical and purposive sampling (Grounded Theory)

**Data quality:** independent researcher, appropriate tools used

**Triangulation:** another perspective or data source.

## Analysis

- Member checking (respondent validation)
- Audit – could someone independently repeat your analysis and identify the same findings?

# Conclusion

Qualitative research answers questions that seek understanding and meaning in complex situations.

The research question may indicate which approach is the best for the question being asked.

The tools or methods used to collect data have different strengths and weaknesses and one or more methods may be more suited to a particular research question.

Rigour can be improved by considering the optimum sample for the study and considering issues that reflect trustworthiness of data.

# Thank you!

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