Critical Appraisal of Qualitative Research

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Outline for today

- What is qualitative research and why use it?
- Theoretical perspectives
  - What this means for qualitative research methods
- Typical research process
- Rigour in qualitative research – what researchers do
- Checklists and how to use them to critically appraise
- Assessing qualitative research in mixed-method studies
What characterises qualitative research?

- Concerned with nuances of **meaning** and in-depth understanding
- Predominantly **inductive** method of enquiry, i.e. bottom-up data-driven approach (Bryman, 2004, p.9)
- **Contextual**: Importance of understanding human experience at an individual perspective (Denzin and Lincoln, 2008)
- Flexible research strategy: Commitment to **iterative** process
- Rich data: **Depth** versus breadth
  - Small sample but high **detail**
- Analysis is descriptive and **interpretative**
- Researcher’s standpoint acknowledged and questioned (**reflexivity**)

*Who me!? I thought you'd never ask.*
Why use qualitative research?

- To understand social phenomena from individual perspective
  - E.g. experience of stigma & discrimination
- To understand behaviour where relevant variables are not apparent
  - Non-adherence to treatment in high risk group
- To study human experience in natural settings
  - Cultural or social context
- To generate plausible theory to explain experiences and behaviour
Qualitative Research Questions

- ? To explore
- Why do...?
- ? To understand...
- Perceptions
- How do...?
- Barriers and facilitators
- Attitudes and beliefs
- Role relationships
- Coping strategies
Qualitative Research Questions

To explore African American Families' Expectations and Intentions for Mental Health Services. (Thompson et al., 2012)

To understand the attitudes, the social pressures (subjective norms) and the enabling factors (environment: services access and quality, time, money etc.,) that influenced the decisions and ability of pregnant women and their families to utilize available safe birthing. (Khan et al., 2012)

To explore barriers and facilitators to cancer education. (Louis-Nance et al., 2012)

How do mentor mothers living with HIV in South Africa cope with potential impact on their role? (Dhlamini et al., 2012)

What is the lived experience of mothers and families aiming for the clinical ideal of breastfeeding their new born for 6 months? (Hoddinott et al., 2012)
Theoretical perspectives in qualitative research

- Based on an epistemology of social constructionism (Denzin and Lincoln, 2008)
  - No single concrete reality, every individual’s perception of it contributes to understanding the larger phenomenon
  - No one’s reality is more important or “more real” than another’s

- “Subtle realism” (Hammersley, 1992; Snape & Spencer, 2003)
  - There is a single concrete reality, and we can know it – to a degree – by using appropriate methods
Common methodological approaches

Ethnography (Hammersley & Atkinson, 2007)

Grounded theory (Charmaz, 2006)

Discourse analysis (Potter, 1996)

Interpretative Phenomenological Analysis (IPA) (Smith et al., 2009)

Content Analysis (Weber, 1990)

Framework analysis (Pope et al., 2000)
## Theory & Methods – What do similarities/differences mean?

<table>
<thead>
<tr>
<th>Aim &amp; Research Question</th>
<th>Ethnography</th>
<th>Grounded theory</th>
<th>Interpretative Phenomenological Analysis</th>
<th>Discourse analysis</th>
<th>Content Analysis</th>
<th>Framework analysis</th>
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<tbody>
<tr>
<td>Immersion in natural setting to gain insider experience; <em>e.g.</em> service evaluations, uptake of medications</td>
<td>To generate theory from empirical data; <em>e.g.</em> stigma in mental health; beliefs and perceptions of mental in different ethnic groups</td>
<td>To understand individual in-depth experience; <em>e.g.</em> lived experience of coping with dementia</td>
<td>To capture nuances of text or public discourse; <em>e.g.</em> understanding political theory, social change, cultural contexts</td>
<td>To capture the meaning at descriptive level; <em>e.g.</em> why do carers access services for their relatives with anorexia?</td>
<td>Mainly used for &quot;problem-oriented&quot; methods in health services research; <em>e.g.</em> what are the training needs for primary care staff?</td>
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<tr>
<td>Sampling &amp; Methods</td>
<td>Observational studies</td>
<td>•Range of perspectives and stay true to research question; unstructured questionnaire •Theoretical sampling</td>
<td>•Homogenous sample and stay true to participants' stories; unstructured questionnaire •Purposeful sampling</td>
<td>•Documents, speeches, newspapers, mass media •Purposeful/ Theoretical sampling</td>
<td>•Documents, e.g. newspapers, mass media •Purposeful/ Convenience sampling</td>
<td>•Interviews with semi-structured questionnaire •Purposeful/ Convenience sampling</td>
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<td>Analysis</td>
<td>Data-driven; but no fixed commitment to developing new theory</td>
<td>•Data-driven •Constant comparison and iterative approach</td>
<td>Identification of descriptive and interpretative themes, that actively engages the researcher and participants</td>
<td>Detailed, thorough analysis of discourses – speeches, conversations, written text</td>
<td>Deductive approach as categories are identified in advance; involves counting of frequencies, i.e. number of times a topic arises</td>
<td>•Theory driven •Deductive approach starting with questions on interview topic guide</td>
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<td>Researcher's position</td>
<td>R's skill and neutral position vital</td>
<td>R's position or potential 'bias' is managed</td>
<td>R's position is paramount; importance of reflexivity</td>
<td>High level of interpretation or abstraction expected</td>
<td>•R's position neutral •Inter-rater reliability often calculated</td>
<td>Neutral position of researcher; limited interpretation</td>
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“Thematic analysis” is method of data analysis – used more commonly in pragmatic research
(e.g. service development, control-group studies of RCTs)
(Braun & Clarke, 2008)
Typical Research Process

1. Literature review
   - What are the gaps in understanding/evidence/theory?
2. Formulate research question
3. Choose methodology
4. Choose appropriate methods
5. Select populations & settings appropriate to sampling strategy
6. Consult experts/stakeholders
   - Consider cultural issues, sensitivity, access; prepare and test topics for interview
7. Iterative data analysis according to appropriately chosen methodology
Rigour in qualitative research

What do researchers do to impose rigour?
Principles of rigour

- Credibility and authenticity
  How can the researcher remained faithful to participants’ experience? (Hammersley, 1992)

- Critical appraisal and integrity
  Has the researcher explore alternative explanations, discrepant data, examine bias & etc.? (Graneheim and Lundman, 2004)
Techniques for imposing rigour

- Triangulation
- Reflexivity
- Multiple coding
- Respondent validation
- Deviant case analysis
Techniques for imposing rigour

**Triangulation**
“The use of more than one method or source of data in the study of a social phenomenon”

Types:
• Multiple methods
  • Focus groups/ interviews/ journals/ observations
• Multiple data sources
  • GPs/ patients/ carers/ social care staff
• Multiple researchers
  • To get different observations on same situation
Techniques for imposing rigour

**Reflexivity**

- Position of researcher in research
- Interaction with participants
- Characteristics of researcher:
  - e.g. age, gender, profession, relationship, personal experience
- Consider what this might imply and try to limit the effects
Techniques for imposing rigour

**Multiple coding**

- 2 or 3 independent researchers
  - Different disciplinary backgrounds
- Calculate inter-rater reliability
  - Process rather than value
- Discuss and resolve discrepancies
- Generates ideas
Techniques for imposing rigour

Respondent validation

• Taking findings back to participants
• Getting their opinions on interpretations and implications drawn from their interviews
• Incorporate this into analysis
• Must be aware of the limitations
  • Researcher aiming to provide overview
• Generates further data to be interpreted
Techniques for imposing rigour

Deviant case analysis

- Process of exploring experiences of those participants who appear to be ‘deviant’ from responses of the norm
- Encourages the researcher to examine, question, develop and refine the emergent theory further
- Most prevalent in grounded theory
Summary – of what researchers do

- Attempt to control subjectivity while staying true to participants’ story
- Acknowledge their own relationship with study/participants/data and question implications on study findings
- Capture as many (subjective!) viewpoints as possible to gain a greater range of perspectives
- Specifically go after and examine “outliers”, through ‘deviant’ participants, and multiple coding exercises that challenge assumptions
Checklists
Caveat!

Readers and researchers should be wary of using criteria checklists as “cook books” to enhance rigour of their study.

Understanding and appreciating qualitative principles and methodological implications more important (Barbour, 2001; Elliott et al., 1999; Kuper et al., 2008a/b)

Individual researcher skill still important (necessary?) for good qualitative research – upto readers to ascertain whether that has been done.
Questions to ask  
(from Kuper et al, 2008a)

1. Was the sample used in the study appropriate to its research question?
2. Were the data collected appropriately?
3. Were the data analysed appropriately?
4. Can I transfer the results of this study to my own setting?
5. Does the study adequately address potential ethical issues, including reflexivity?
6. Overall: is what the researchers did clear?
Was the sample used appropriate to its research questions?

☐ How were participants selected and recruited?

☐ Were they relevant to the research question?

☐ Was sampling strategy justified?

☐ Was the sampling purposive/ theoretical?

☐ Was it a convenience sample?
Were the data collected appropriately?

- Were the data collection methods appropriate for research objectives and settings?
  - Field observation (participant/ non-participant)
  - Interviews (in-depth; focus groups)
  - Document analysis (diaries; letters; newspaper articles)

- Was there explicit consideration of how this might have influenced findings?
Sample size dilemma?

- Not an issue of sample size in statistical sense
- Data collection needs to be comprehensive enough in breadth and depth to generate and support interpretation
- Adequacy depends on emerging findings
  - Need for iterative process
- Can the data be audited?
  - Paper trail

“Data don’t make any sense, we will have to resort to statistics.”
Were the data analysed appropriately?

- Transparency of analytical methods – especially for interpretation
- Systematic approach should have been used
  - Data-driven or theory-driven (e.g. thematic analysis; grounded theory)
- Efforts made to describe contradictory data and divergent findings
- Multiple coding – so findings are corroborated by more than one researcher
- Do results look credible and justify conclusions?
Can I transfer results of this study to my own setting?

- Qualitative research is contextual – i.e. not seeking to be generalisable
- “Transferability” more important principle (Kuper et al. 2008a)
  - How do these apply in other contexts/ situations/ real world?
- Onus for assessing transferability rests with reader
  - Author has to describe setting and context transparently and honestly
- Real-world implications for practice should be clearly described, if not obvious
Does the study adequately address potential ethical issues, including reflexivity?

Essentially, balancing moral actions of the researcher and virtues of research aims and outcomes

Principles to follow:
1. Autonomy
2. Beneficence/non-maleficence
3. Justice
4. Misrepresentation

- In qualitative research, components of ethical research relationship
  - Acknowledgement of bias
  - Rigour
  - Rapport and managing distress
  - Respect for autonomy
  - Confidentiality, especially in research reports
  - Avoidance of exploitation (being aware of power relationships)
The importance of relevance

A form of transferability, ‘relevance’ refers to emphasizing the value of the study and the wider implications of it (Mays & Pope, 2000)

- “So what?”
- What contribution does the study make to existing knowledge?
- Are the limitations thoughtfully discussed?
- How do the findings fit with existing theory?
  - Does it contribute by developing new theory?
- What are the implications for practice/service?
- Has the study been disseminated responsibly?
Coherence & Transparency:
Is what the researchers did clear?
Assessing qualitative research in mixed-method studies

- Integrating qualitative and quantitative methods should be done from conception, design to conclusion
  - Often ensures triangulation
- Has study been adequately justified?
  - Does it explain descriptive, reductionist quantitative study
- Rationale presented for chosen methodology
- Sampling conducted appropriately?
- Ethical balance – power relationships considered?
  - Recruiting participants from control group
- Have findings from both studies been presented jointly?
  - Is it necessary?
Qualitative + Quantitative

Research study and methods should be designed and chosen on the basis of the research questions.
CASP Quality checklist

Screening questions
1. Was there a clear statement of the aims of the research?
2. Is a qualitative methodology appropriate?

Is it worth continuing?

Detailed questions
3. Was the research design appropriate to address the aims of the research?
4. Was the recruitment strategy appropriate to the aims of the research?
5. Were the data collected in a way that addressed the research issue?
6. Has the relationship between researcher and participants been adequately considered?
7. Have ethical issues been taken into consideration?
8. Was the data analysis sufficiently rigorous?
9. Is there a clear statement of findings?
10. How valuable is the research?
Thank you!

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Questions?


