QUALITATIVE DATA ANALYSIS (QDA)

Division for Postgraduate Studies (DPGS)
Post-graduate Enrolment and Throughput Program (PET)

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Overview

1. Qualitative Research
2. Qualitative Data
3. Qualitative Analysis
4. Qualitative Reporting
Qualitative Research
What is Qualitative Research

Qualitative research is development of concepts which help us to understand social phenomena in natural (rather than experimental) settings, giving due emphasis to the meanings, experiences and views of the participants.


Many qualitative researchers operate on an assumption that the empirical evidence they gather is related to both theoretical ideas and structures that lies beneath observable reality. But the data from the observable, surface reality are only samples of what happens on the visible, surface level.

Such data only partially reflects what goes on unseen, beneath the surface where deeper social structures or relationships resides but the researcher uses these data to evaluate theories and make generalisations or conclusions.
## Qualitative versus Quantitative Research: Basic Differences

<table>
<thead>
<tr>
<th></th>
<th>Qualitative</th>
<th>Quantitative</th>
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</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>To describe a situation.</td>
<td>To measure magnitude.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>No pre-determined response categories.</td>
<td>Pre-determined response categories</td>
</tr>
<tr>
<td><strong>Data</strong></td>
<td>In-depth explanatory data from a small sample.</td>
<td>Wide breadth of data from large statistically representative sample.</td>
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<tr>
<td><strong>Analysis</strong></td>
<td>Draws out patterns from concepts and insights.</td>
<td>Tests hypotheses, uses data to support conclusion.</td>
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<tr>
<td><strong>Result</strong></td>
<td>Illustrative, explanatory &amp; individual responses.</td>
<td>Numerical aggregation in summaries, responses are clustered.</td>
</tr>
<tr>
<td><strong>Sampling</strong></td>
<td>Theoretical</td>
<td>Statistical</td>
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<tr>
<td></td>
<td>Qualitative</td>
<td>Quantitative</td>
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<tr>
<td>-------------------------------</td>
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<td>----------------------------------------------------</td>
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<tr>
<td><strong>Research question</strong></td>
<td>Fixed/Focused</td>
<td>Broader, Contextual, Flexible</td>
</tr>
<tr>
<td><strong>Expected outcome</strong></td>
<td>Identified in advance</td>
<td>Usually not predefined, emergent research question.</td>
</tr>
<tr>
<td><strong>Hierarchy of phases</strong></td>
<td>Linearity</td>
<td>Circular</td>
</tr>
<tr>
<td><strong>Confounding factors</strong></td>
<td>Controlled during design &amp; analysis</td>
<td>Searched in field.</td>
</tr>
<tr>
<td><strong>Time dimension</strong></td>
<td>Slower</td>
<td>Rapid</td>
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## Qualitative versus Quantitative Research: Data Collection Method

<table>
<thead>
<tr>
<th></th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
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<tbody>
<tr>
<td><strong>Sampling</strong></td>
<td>Random sampling.</td>
<td>Open ended and less structured protocols (flexible)</td>
</tr>
<tr>
<td><strong>Tools</strong></td>
<td>Structured data collection instruments.</td>
<td>Depend on interactive interviews.</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Produce results that generalize, compare and summarize.</td>
<td>Produce results that give meaning, experience and views.</td>
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</table>
## Important Concepts in Designing Qualitative Research

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
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<tbody>
<tr>
<td>Natural setting</td>
<td>Participants are free from any control &amp; data are collected in their natural environment</td>
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<tr>
<td>Holism</td>
<td>The whole is more than the sum, take magnitude of contextual factors into account.</td>
</tr>
<tr>
<td>Human as a research instrument</td>
<td>Researcher is involved in every step being responsive, flexible, adaptive and good listener.</td>
</tr>
<tr>
<td>Saturation or redundancy</td>
<td>A stage where additional interview or observation is not believed to add new information.</td>
</tr>
</tbody>
</table>
### Common Qualitative Research Designs

<table>
<thead>
<tr>
<th>Study Design</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Ethnography</strong></td>
<td>Study of theory and culture of a group of people usually to develop cultural awareness &amp; sensitivity.</td>
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<tr>
<td><strong>Phenomenology</strong></td>
<td>Study of individual experiences of events e.g. The experience of AIDS care.</td>
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<tr>
<td><strong>Grounded theory</strong></td>
<td>Going beyond adding to the existing body of knowledge to developing a new theory about a phenomenon - theory grounded on data.</td>
</tr>
<tr>
<td><strong>Participatory action research</strong></td>
<td>Individual &amp; groups researching their own personal being, socio-cultural setting and experiences.</td>
</tr>
<tr>
<td><strong>Case study</strong></td>
<td>In-depth investigation of single or small number of units at a point (over a period) in time.</td>
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</table>
Sampling in qualitative research is mostly purposive – with specific criteria in mind! It seeks conceptual applicability rather than quantitative representativeness. It also seeks to capture the range of views/experiences, pursue saturation of data and draw theory from data. The sampling techniques includes:

- Snow ball/chain sampling
- Extreme/deviant case sampling
- Homogeneous sampling
- Maximum sampling
- Convenience sampling
- Opportunistic sampling
Qualitative Data
What is Qualitative Data

- Transcripts of individual interviews and focus groups or field notes, copies of documents, audio and video recordings from observation of certain activities.

- Data that are related to concepts, opinions, values and behaviours of people in a social context.

- Data that are not easily reduced to numbers.

(www.socialresearchmethods.net/kb/qualdata.php)
Types of Qualitative Data

- Structured text (writings, stories, survey comments, news articles, books etc).
- Unstructured text (transcription, interviews, conversation etc).
- Audio recordings and music.
- Video recordings (graphics, art, pictures, visuals).
# Qualitative Data Collection Methods

<table>
<thead>
<tr>
<th>Methods</th>
<th>Brief Explanation</th>
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<tbody>
<tr>
<td>Observation</td>
<td>The researcher gets close enough to study subjects to observe (with or without participation) usually to understand whether people do what they say they do.</td>
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<tr>
<td>Interview</td>
<td>This involves asking questions, listening to and recording answers from an individual or group on a structured, semi-structured or unstructured format in an in-depth manner.</td>
</tr>
<tr>
<td>Focus Group Discussion</td>
<td>Focused (guided by a set of questions) and interactive session with a group small enough for everyone to have chance to talk and large enough to provide diversity of opinions.</td>
</tr>
<tr>
<td>Other Methods</td>
<td>Rapid assessment procedure (RAP), Free listing, Ranking, Life history (biography) etc.</td>
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## Questions for Qualitative Interviews

<table>
<thead>
<tr>
<th>Types of question</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Hypothetical</td>
<td>If you get the chance to be an HIV scientist, do you think you can discover a vaccine for HIV?</td>
</tr>
<tr>
<td>Provocative</td>
<td>I have heard people saying most evaluations are subjective, what do you think?</td>
</tr>
<tr>
<td>Ideal</td>
<td>In your opinion, what would be the best solution for eliminating gender-based violence?</td>
</tr>
<tr>
<td>Interpretative</td>
<td>What do you mean by good?</td>
</tr>
<tr>
<td>Leading</td>
<td>Do you think prevention is better than cure?</td>
</tr>
<tr>
<td>Loading</td>
<td>Do you watch that culturally degrading TV show on the use of condom?</td>
</tr>
<tr>
<td>Multiple</td>
<td>Tell me your three favourite authors, the book you like best by each author and why you like those books?</td>
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</tbody>
</table>
Focus of Qualitative Questions

- **Experience:** When you told your manager that the project has failed, what happened?

- **Opinion:** What do you think about the role of evaluation for program improvement?

- **Feelings:** When you got to know that the project was a success, how did you feel?

- **Knowledge:** Tell me about the different ways of promoting PME?

- **Input:** When you have lectures on evaluation assessment, what does the instructor tell you?
Preparing Metadata (Log)

- Project/ research title
- Date of data collection
- Place of data collection
- ID-code of informants
- Research team
- Method of data collection
- Documentation type: Tape record, notes and observations
Qualitative Data Analysis
What is Qualitative Data Analysis

Qualitative Data Analysis (QDA) is the range of processes and procedures whereby we move from the qualitative data that have been collected, into some form of explanation, understanding or interpretation of the people and situations we are investigating.

QDA is usually based on an interpretative philosophy. The idea is to examine the meaningful and symbolic content of qualitative data.

(http://onlineqda.hud.ac.uk/Intro_QDA/what_is_qda.php)
Approaches in Qualitative Data Analysis

Deductive Approach

- Using your research questions to group the data and then look for similarities and differences.
- Used when time and resources are limited.
- Used when qualitative research is a smaller component of a larger quantitative study

Inductive Approach

- Used when qualitative research is a major design of the inquiry.
- Using emergent framework to group the data and then look for relationships.
Points of Focus in Analyzing Text (quantitative) Data

- The primary message content.
- The evaluative attitude of the speaker toward the message.
- Whether the content of the message is meant to represent individual or group-shared ideas.
- The degree to which the speaker is representing actual versus hypothetical experience.

(http://qualitativeresearch.ratcliffs.net/15methods.pdf)
Common Terms Used in Qualitative Data Analysis

- **Theory:** A set of interrelated concepts, definitions and propositions that presents a systematic view of events or situations by specifying relations among variables.

- **Themes:** Categorical ideas that emerge from grouping of lower-level data points.

- **Characteristic:** A single item or event in a text, similar to an individual response to a variable or indicator in a quantitative research. It is the smallest unit of analysis.

- **Coding:** The process of attaching labels to lines of text so that the researcher can group and compare similar or related pieces of information.

- **Coding sorts:** Compilation of similarly coded blocks of text from different sources into a single file or report.

- **Indexing:** Process that generates a word list comprising all the substantive words and their location within the texts entered into a program.
Principles of Qualitative Data Analysis

- People differ in their experience and understanding of reality (constructivist-many meanings).

- A social phenomenon can’t be understood outside its own context (Context-bound).

- Qualitative research can be used to describe phenomenon or generate theory grounded on data.

- Understanding human behaviour emerges slowly and non-linearly.

- Exceptional cases may yield insights into a problem or new idea for further inquiry.
Features of Qualitative Data Analysis

- Analysis is circular and non-linear.
- Iterative and progressive.
- Close interaction with the data.
- Data collection and analysis is simultaneous.
- Level of analysis varies.
- Uses inflection i.e. “this was good”.
- Can be sorted in many ways.
- Qualitative data by itself has meaning, i.e. “apple”.
**Types of Qualitative Analysis**

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<tr>
<td>1</td>
<td>Content analysis</td>
</tr>
<tr>
<td>2</td>
<td>Narrative analysis</td>
</tr>
<tr>
<td>3</td>
<td>Discourse analysis</td>
</tr>
<tr>
<td>4</td>
<td>Framework analysis</td>
</tr>
<tr>
<td>5</td>
<td>Grounded theory</td>
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</tbody>
</table>

([http://onlineqda.hud.ac.uk/methodologies.php](http://onlineqda.hud.ac.uk/methodologies.php))
1) Content Analysis:

Content analysis is the procedure for the categorization of verbal or behavioural data for the purpose of classification, summarization and tabulation. Content analysis can be done on two levels:

**Descriptive**: What is the data?

**Interpretative**: what was meant by the data?

(http://writing.colostate.edu/guides/research/content/pop2a.cfm)
2) Narrative Analysis

Narratives are transcribed experiences. Every interview/observation has narrative aspect. The researcher has to sort-out and reflect up on them, enhance them and present them in a revised shape to the reader. The core activity in narrative analysis is to reformulate stories presented by people in different contexts and based on their different experiences.

(http://faculty.chass.ncsu.edu/garson/PA765/narrativ.htm)
3) Discourse Analysis

This is a method of analyzing a naturally occurring talk (spoken interaction) and all types of written texts. It focuses on how people express themselves verbally in their everyday social life i.e. how language is used in everyday situations?

a) Sometimes people express themselves in a simple and straightforward way
b) Sometimes people express themselves vaguely and indirectly
c) Analyst must refer to the context when interpreting the message because the same phenomenon can be described in a number of different ways depending on context.

(http://www.bmj.com/cgi/content/extract/337/aug07_3/a879.42)
4) Framework Analysis

- **Familiarization**: Transcribing & reading the data
- **Identifying a thematic framework**: Initial coding framework which is developed both from a priori issues and from emergent issues
- **Coding**: Using numerical or textual codes to identify specific piece of data which correspond to different themes
- **Charting**: Charts created using headings from thematic framework.
- **Mapping and interpretation**: Searching for patterns, associations, concepts and explanations in the data.

(http://www.bmj.com/cgi/content/full/320/7227/114)
5) **Grounded Theory:**

This theory starts with an examination of a single case from a ‘pre-defined’ population in order to formulate a general statement (concept or a hypothesis) about a population. Afterwards the analyst examines another case to see whether the hypothesis fits the statement. If it does, a further case is selected but if it doesn’t fit there are two options:

*Either the statement is changed to fit both cases or the definition of the population is changed in such a way that the case is no longer a member of the newly defined population. Then another case is selected and the process continues.*

In such a way one should be able to arrive at a statement that fits all cases of a population-as-defined. This method is only for limited set of analytic problems: those that can be solved with some general overall statement.

([http://www.bmj.com/cgi/content/extract/337/aug07_3/a567 44](http://www.bmj.com/cgi/content/extract/337/aug07_3/a567 44))
Strategies for Analyzing Observations

- **Chronology**: describe what was observed chronologically overtime, to tell the story from the beginning to the end.

- **Key events**: describing critical incidents or major events, not necessarily in order of occurrence but in order of importance.

- **Various settings**: describe various places, sites, settings, or locations in which events/behaviours of interest happen.

- **People**: describing individuals or groups involved in the events.

- **Process**: describing important processes (e.g. Control, recruitment, decision-making, socialization, communication).

- **Issues**: Illuminating key issues – how did participants change?
The Process or Steps of Qualitative Data Analysis

1. Organize the data
2. Identify framework
3. Sort data into framework
4. Use the framework for descriptive analysis
5. Second order analysis
1. Organize the Data

1. Transcribe the data (you can use hyperTRANSCRIBE software).

2. Translate the data (You can use language translation software like SYSTRAN).

3. Data cleaning.

4. Label the data (Structuring & Familiarizing).

(www.researchware.com/ht)
2. Identify a Framework

1. Framework will structure, label and define data.

   *Explanatory – Guided by the research question.*

   *Exploratory-Guided by the data.*

2. Framework = Coding plan.
3. Sort Data into Framework

1. Code the data.
2. Modify the Framework.
3. Data entry if use computer packages.

(http://onlineqda.hud.ac.uk/Intro_QDA/how_what_to_code.php)
4. Use Framework in Descriptive Analysis

1. Arrange the responses in categories and,

2. Identify recurrent themes.

Note: Stop here if research is exploratory.
5. Second Order Analysis

1. Identify recurrent themes.

2. Notice patterns in the data.

3. Identify respondent clusters (Search for causality and identify related themes).

4. Build sequence of events.

5. Search data to answer research questions.

6. Develop hypothesis and test.
Traditional Method of Qualitative Analysis

Traditional Qualitative data analysis is labour-intensive. After gathering data, the researcher will:

- Transcribe the source material with a word processor,
- Make multiple photocopies of the text,
- Painstakingly read through and assign codes to the material,
- Cut the pages up into coded passages and then,
- Manually sort the coded text in order to analyze the patterns they find.

(http://gsociology.icaap.org/methods/qual.htm)
Qualitative Analysis with Software

With qualitative software, your workflow will be similar, but each step will be made easier by the computer’s data storage capability, automated searching and display.

You can use text, picture, video and audio source files directly. You can assign codes manually (auto-code) to any section of the text, audio or video or part of a picture.

Analysis is easy with the report feature, where you can select a subset of cases and codes to work with, choose what data to use, and sort your reports automatically

(http://caqdas.soc.surrey.ac.uk/)
Uses of Computer Software in Qualitative Studies

1. Transcribing data
2. Writing/editing the data.
3. Storage of data
4. Coding data (keywords or tags)
5. Search and retrieval of data.
6. Data linking of related text.
7. Writing/editing memos about the data.
8. Display of selected reduced data.
9. Graphic mapping.
10. Preparing reports.

(http://onlineqda.hud.ac.uk/Intro_CAQDAS/What_the_sw_can_do.php)
Common Qualitative Software

1. Atlas ti 6.0 (www.atlasti.com)
2. HyperRESEARCH 2.8 (www.researchware.com)
3. Max QDA (www.maxqda.com)
4. The Ethnography 5.08
5. QSR N6 (www.qsrinternational.com)
6. QSR Nvivo (www.qsrinternational.com)
7. Weft QDA (www.pressure.to/qda)
8. Open code 3.4 (www8.umu.se)
**Basic Steps in using Qualitative Software**

1. Install the program (note the requirements),
2. Learn the operation using the help menu),
3. Prepare a source document (in text format),
4. Open a project/study unit/Hermeneutic unit,
5. Import text, audio, video, picture source files ,
6. Read the imported text documents,
7. Select the segment of the text,
8. Insert codes, catégories, memos, quotation etc,
9. Search, sort, manage categories, manage quotations etc,
10. Mapping of concepts, layering, linking etc,
11. Producing reports, matrices, exporting data, print.
Qualitative Reporting
Qualitative research generates rich information therefore deciding where to focus and the level of sharing is very challenging.

(http://www.psy.dmu.ac.uk/michael/qual_writing.htm)
Choosing a Style and Focus

Format

- Research report.
- Scientific research article.
- Report to donor.
- Field report.
- Evaluation report.

Focus

- Practitioners: Concrete suggestions for better practice, policy recommendations.
Variations in the Report Format

- Problem-solving approach (problem-based),
- Narrative approach (chronological),
- Policy approach (evidence-based),
- Analytic approach (Theory/conceptual framework based)
Reporting Qualitative Research

Typically uses quotes from data

- Descriptive
- Direct link with data
- Credibility

Ways to use quotes

- Illustrative
- Range of issues.
- Opposing views
Interpretation

Interpretation is the act of identifying and explaining the core meaning of the data. It is also the act of organizing and connecting emerging themes, sub-themes and contradictions to get the bigger picture of what it all means.

- Think how best to integrate data from multiple sources and methods,
- Make generalization-providing answers to questions of social and theoretical significance, ensuring credible or trustworthy interpretations.
Standard Report Format

1. **Introduction**
   - Literature review.
   - Purpose of the study.
   - Brief description of the study (Who did the study, where and when. Description of relevant cultural and contextual information).

2. **Methods:** study design, sampling method, data collection method, data analysis methods.

3. **Results:** Presentation, interpretation, relate to relevant conceptual framework, discuss methodological difficulties affecting your results.

4. **Conclusion:** Key findings, logical next step, implication of findings.

5. **Recommendations:** Relate to policy or practice.

6. **Acknowledgement**

7. **References**