QUALITATIVE DATA ANALYSIS

FROM TOPICS TO THEMES

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Overview

- What is qualitative data analysis?
- How do I conduct qualitative data analysis and present results?
Generic Design is when researchers use generic or “eclectic” qualitative methods (e.g., open coding, axial coding, constant comparison) to produce conceptual categories and themes.

Designer Design is when researchers follow designer or “name brand” methodologies to produce the most transformed results and findings (e.g., thick descriptions, grounded theories, essences of lived experience).
Generic vs. Designer

- Qualitative Data Analysis
- Qualitative Content Analysis
- Thematic Analysis
- Qualitative Interviewing
- Ethnographic
- Phenomenological
- Case Study

- Ethnography
- Grounded Theory
- Phenomenology
- Narrative Analysis
- Discourse Analysis
Defining Qualitative Data

- Words
- Feelings
- Actions
- Rituals
- Experiences
- Perspectives
- Impressions
- Events
- Artifacts
- Symbols
Defining Qualitative Data Sources

- Interviews and Transcripts
- Observations and Fieldnotes
- Documents
- Pictures and Images
- Audio and Visual Recordings
Qualitative data analysis is the rigorous process of selecting qualitatively distinct data, articulating the qualitative meaning ascribed to those units, and commenting on the qualitative similarities and differences noted between and among these distinct units of data.
The goal of qualitative data analysis can be to describe, explain, and/or interpreting qualitative patterns in terms of words, numbers, matrices, pictures, sounds, or other forms of representation.
Human thoughts are combinational (simple parts combine)

Human thoughts are recursive (parts can be embedded within parts)

Human languages are combinational

Human thoughts about human languages are recursive

Qualitative Data Analysis is a recursive combining of simple steps
Defining Qualitative Data Analysis

- Metaphoric: Saying something about something
- Coding: Drawing a distinction and naming it
- Analysis: Making sense of how these distinctions are qualitatively different and qualitatively similar
Recursive Process

Relationship 1, 2, 3, & 4

Idea 4

Relationship 1, 2, & 3

Idea 3

Relationship 1 & 2

Idea 2

Idea 1
Recursive Process

Composite 1, 2, 3, & 4

Case 4

Composite 1, 2, & 3

Case 3

Composite 1 & 2

Case 2

Case 1
Defining Qualitative Data Analysis

- Discovery-oriented (i.e., typically more inductive than deductive analysis)
- Iterative (i.e., the process can be changed based upon the outcomes)
- Circular (e.g., constant comparison leading the researcher from the analysis to the field and back again)
Transformation from data, to information, to knowledge, to wisdom

Transformation from separation to connection (e.g., coding to create discrete nodes and then connecting the nodes to create categories)
## Typology of Qualitative Findings

<table>
<thead>
<tr>
<th>Closest to Data</th>
<th>Degree of Transformation</th>
<th>Farthest from Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Findings</td>
<td>Topical</td>
<td>Conceptual / Explatory</td>
</tr>
<tr>
<td></td>
<td>Thematic Survey</td>
<td>Thematic Description</td>
</tr>
<tr>
<td></td>
<td>Exploratory Research</td>
<td>Descriptive</td>
</tr>
<tr>
<td></td>
<td>Qualitative Research</td>
<td>Explanatory</td>
</tr>
</tbody>
</table>

Adapted from Sandelowski and Barroso, 2003, p. 980
No Findings (Not Research)

- Presenting data as if they were the findings
- Reproducing interview data, case histories, or stories they had collected in a reduced form with minimal or no interpretation of those data
- Containing no analysis and no interpretation

(Sandelowski & Barroso, 2003, pp. 909-910)
Emphasizing nominal or categorical data, or lists and inventories of topics covered by research participants in interviews and focus groups.

Emphasizing inventories, frequencies, and percentages of participants stating a topic, or enumerations of the topics themselves.

Investigators often introducing topics in their interview questions and/or derived from a manifest content analysis.

(Sandelowski & Barroso, 2003, pp. 910-912)
Conveying an underlying or more latent pattern or repetition discerned in the data

Containing the lowest level of abstraction

Offering more penetrating or nuanced descriptions of experience, using either in vivo or everyday language, or themes or concepts from existing empirical or theoretical literature to label and/or organize their data

(Sandelowski & Barroso, 2003, pp. 912-913)
Conceptual / Thematic Description (Descriptive Qualitative Research)

- Presenting one or more concepts or themes either developed in situ from the data or imported from existing theories or literature outside the study
- Moving towards interpretively integrating portions of data
- Extending the theoretical or other intellectual tradition from which they were imported and/or illuminating an experience

(Sandelowski & Barroso, 2003, pp. 913-914)
Transforming data to produce grounded theories, ethnographies, or otherwise fully integrated explanations of some phenomenon, event, or case.

Clarifying or elucidating conceptual or thematic linkages that re-present the target phenomenon in a new way.

Attending to relevant variations in both sample and data (Sandelowski & Barroso, 2003, p. 914)
The “4-T” Approach

- **Target**: The portion of the text that has caught your interest
- **Tag**: The name you give to the target that reflects the meaning you ascribe to it
- **Tale**: The story of the tag’s meaning in relationship to the target in which you make the evidential qualities of the target in support of your tag overt.
- **Thesis**: The proposition that connects the patterns reflected across the tales of the tags’ relationships to their targets (Chenail, 2010)
Investigator as Instrument

- Generate and Analyze the Data
- Bricoleur
- Preparation
- Stamina
Investigator as Instrument

- Systematic yet creative
- Focused yet reflective
- Testimonial yet evidential
- Subjective yet objective
The “Nuts and Bolts”

- Codes, Categories, and Themes
- Analysis and Memos
- Quality Control
Articulating the relationship between meaning and data (Codes), Codes (Categories) and Categories (Themes)

Internal Integrity (i.e., Is there a high degree of homogeneity across the individual codes or across the coded units within the categories?)

External Integrity (i.e., Is there a high degree of heterogeneity or differentiation between the array of homogeneous codes, categories, or themes?) (Chenail, 2008)
Codes, Categories, and Themes

- Exhaustive System of Codes, Categories, and Themes (i.e., No significant meaningful feature of the phenomenon under study falls outside of the array)

- Dual Planes of Focus: Horizontality (i.e., category-to-category relationships) and Verticality (i.e., category-to-phenomena relationships) (Chenail, 2008)
Transformation One

Clip One Transcription

- Code One
- Code Two
- Code Three
- Code Four

Clip Two Transcription

- Code One
- Code Two
- Code Three
- Code Four
Clip One

Category A

Category B

Code One

Code Two

Code Three

Code Four
Transformation Three

Clip One
- Category A
- Category B
- Category C

Clip Two
- Category A
- Category B
- Category C

Clip Three
- Category A
- Category B
- Category C
## Theme One

<table>
<thead>
<tr>
<th>Category A</th>
<th>Category B</th>
<th>Category C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Coded Clips One, Two, &amp; Three)</td>
<td>(Coded Clips One, Two, &amp; Three)</td>
<td>(Coded Clips One, Two, &amp; Three)</td>
</tr>
</tbody>
</table>
Analysis

- Making Sense of the Codes, Categories, and Themes in Context (i.e., Research Question and Literature)

- Shifting from Information to Knowledge

- Asking yourself the question, “What have I learned?”
Memos

- Memos are notes in which we make the meaning of our codes, categories, themes, and analysis transparent.
- Memos are the start of the analysis and the results.
- Memos create our audit trails.
Open and Axial Coding of Case 30:

[Month]/07 Client came in with anxiety and stress related to her boyfriend moving away to another city, her impending licensure exam for social work & her moving in with her boyfriend in the end of August.

Comment [RC1]: Clinical Problem (Types): The therapist noted the client reported seeking therapy because she shared having two types of problems: Anxiety and Stress. [Reasons for coming to therapy (Problems)]

Comment [RC2]: Reasons for Clinical Problems (Interpersonal and Professional): The therapist noted the client reported her clinical problems were Interpersonal (i.e., related to her boyfriend moving to another city and her moving in with him in August) and Professional (i.e., an impending licensure exam for social work career). [Reasons for coming to therapy (Problems)]
### Metaphoric Abstraction

<table>
<thead>
<tr>
<th>Qualitative Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The This</strong></td>
</tr>
<tr>
<td>Code, Category, Concept, Theory</td>
</tr>
</tbody>
</table>
## Qualitative Data Analysis

<table>
<thead>
<tr>
<th>The This</th>
<th>The That</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Code</td>
<td>Unit of Analysis</td>
</tr>
</tbody>
</table>

**Clinical Problem:** The therapist noted the client reported coming into therapy because she shared having anxiety as her clinical problem, that is, a reason for which someone seeks psychotherapy.

*Client came in with anxiety...*
## In Vivo Code

<table>
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<th>Qualitative Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The This</strong></td>
</tr>
<tr>
<td>In Vivo Code</td>
</tr>
<tr>
<td><strong>Anxiety</strong>: The therapist noted the client reported coming into therapy with anxiety.</td>
</tr>
</tbody>
</table>
Quality Control

- Instrumentation
- Piloting
- Transparency
- Audit Trails
- Constant Comparison
- Member Checking
- Peer or Expert Debriefing
- Multiple Coders
- Exemplars
Presenting Results

- Data as Star
- Juxtaposition
- Exemplars for every assertion, pronouncement, or declaration (Chenail, 1995)
Compose your analytical memos so they could be cut and pasted into the body of your report.

Name and explain/describe the qualitative difference in full sentences.

Copy and paste the data excerpt into the memo.

Explain or describe how the data excerpt exemplifies and evidences the meaning of your noted qualitative difference (e.g., code, category, theme).

Bottom Line: Your analysis is your report!
Hedging

Avoid Errors of Deficiency and Exuberance by Staying Close to the Data

Develop a Rhythm

(Chenail, 1995)
Hedging Writing Style

- Restricting as in setting or qualifying conditions relative to the results being reported to avoid extremes or limit meaning.

- Fits with constructionist, constructivist, phenomenological, naturalistic, exploratory, descriptive, interpretive, post-modern, and critical research approaches
Hedging Devices

- **Propositions** to express results for consideration and not “results as the facts” by using “such as,” “may,” or “perhaps”

- **Possibilities** to express a likelihood or certainty of results and not “results as the truth” by using “seem,” “appear,” “suggest,” “speculate,” or “imply”

- **Approximations** to express quantity, frequency, degree, and time of results by using “generally,” “approximately,” “most,” “some,” “many,” “few,” or “frequently”

- **Conditions** to express co-dependent or local situations or circumstances relative to results by reporting “who,” “what,” “where,” “when,” “why,” and “how”
Although the findings of this study are compromised by the small sample size and its variability, they suggest in a very tentative way that there may be subtle differences in the way choice is perceived, "exercised and burdened" [50] (p. 237) in the aftermath of the detection of fetal impairment. (Sandelowski & Jones, 1996, p. 359)
Although a much larger sample is required to verify that these are distinguishable patterns of emplotments of choice, one very tentative conclusion that may be drawn from this finding is that some external circumstances may permit a greater variety of narrative constructions than others. (Sandelowski & Jones, 1996, p. 359)
Although the findings from this study are very tentative and must be verified, they do raise interesting questions for future research. (Sandelowski & Jones, 1996, p. 359)

Natural - The data are presented in a shape that resembles the phenomenon being studied. For instance, if the data are excerpts from a therapy session, present them in a sequential order or in an order that re-presents the flow of the session itself.

Most Simple to Most Complex - For sake of understanding, start the presentation of data with the simplest example you have found. As the complexity of each example or exemplar presented increases, the reader will have a better chance of following the presentation. Erving Goffman's work is a good example of this style.
First Discovered/Constructed to Last Discovered / Constructed - The data are presented in a chronicle-like fashion, showing the course of the researcher's personal journey in the study. This style is reminiscent of an archeological style of presentation: What was the first "relic" excavated, then the second and so forth.
Quantitative-Informed - In this scheme data are presented according to strategies commonly found in quantitative or statistical studies. Data are arranged along lines of central tendencies and ranges, clusters, and frequencies.
Theory-Guided - Data arrangement is governed by the researcher's theory or theories regarding the phenomenon being represented in the study. For instance, a Marxist-informed researcher might present data from a doctor-patient interview in terms of talk which shows who controls the means for producing information in the interaction, talk which illustrates who is being marginalized, and so forth. In clinical qualitative research, this approach is quite prevalent as clinicians organize the data in terms of their understandings of how doctor-patient, or nurse-patient, and therapist-client interact.
Narrative Logic - Data are arranged with an eye for storytelling. Researchers plot out the data in a fashion which allows them to transition from one exemplar to another just as narrators arrange details in order to best relate the particulars of the story.

Most Important to Least Important or From Major to Minor - Like the journalistic style of the inverted pyramid, the most important "findings" are presented first and the minor "discoveries" come last.
Dramatic Presentation - This one is the opposite of the inverted pyramid style. With the dramatic arrangement scheme, researchers order their data presentation so as to save the surprises and unforeseen discoveries for last.

No Particular Order Order - As it sounds, data are arranged with no particular, conscious pattern in mind, or the researcher fails to explain how or why the data are displayed the way they are.

Develop a Rhythm

- List Section Heading
- Present the Distinction or Finding
- Introduce the First Data Exemplar of this Distinction
- Display the First Data Exemplar of this Distinction
- Comment on the First Data Exemplar as Evidence
- Make Transition to Second Data Exemplar and Repeat the Pattern Until the Closing of this Section
- **Theme One**
  - Introduce first category (i.e., Category A)
  - Introduce first exemplar (e.g., Category A’s Code One from Clip One)
  - Explain how the exemplar evidences a quality of first category
  - Explain relationship between first category’s qualities and the overall theme’s qualities
  - Introduce additional exemplars for first category
  - Explain how each evidences a different quality of Category A
  - Transition to second category
Theme One
- Introduce second category (i.e., Category B)
- Introduce first exemplar (e.g., Category B’s Code One from Clip One)
- Explain how the exemplar evidences a quality of second category
- Explain relationship between second category’s qualities and the overall theme’s qualities
- Introduce additional exemplars for second category
- Explain how each evidences a different quality of Category B
- Transition to additional categories, conclude Theme One, and transition to Theme Two
Report

- Theme Two
  - Repeat
Presenting Results

- Maintain Coherence and Build Confidence
- Stay Focused on the Research Question
- The Role and Place of the Literature


Readings


Resources

- **Online QDA:** [http://onlineqda.hud.ac.uk/index.php](http://onlineqda.hud.ac.uk/index.php)

- **The Qualitative Report:** [http://www.nova.edu/ssss/QR/](http://www.nova.edu/ssss/QR/)

- **Graduate Certificate in Qualitative Research** [http://www.nova.edu/ssss/QR/](http://www.nova.edu/ssss/QR/)

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2008
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