Qualitative Data Analysis

What is qualitative data

- Qualitative data is information gathered in a nonnumeric form.
- Common examples of such data are:
  - Interview transcript
  - Field notes (notes taken in the field being studied)
  - Video
  - Audio recordings
  - Images
  - Documents (reports, meeting minutes, e-mails)
  - Text
  - Written words
  - Phrases
  - Symbols describing or presenting people, actions and events in social life

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.

What is qualitative data analysis

- Throughout the analysis, the analyst should be asking and re-asking the following questions:
  - What patterns and common themes emerge in responses dealing with specific items? How do these patterns (or lack thereof) help to illuminate the broader study question(s)?
  - Are there any deviations from these patterns? If yes, are there any factors that might explain these typical responses?
  - What interesting stories emerge from the responses? How can these stories help to illuminate the broader study question(s)?
  - Do any of these patterns or findings suggest that additional data may need to be collected? Do any of the study questions need to be revised?
  - Do the patterns that emerge corroborate the findings of any corresponding qualitative analyses that have been conducted? If not, what might explain these discrepancies?

The process of Qualitative data analysis

1. Data reduction
2. Data organization using codes,categories or themes
3. Data interpretation-drawing conclusions, patterns, answering evaluation questions, reaching saturation.
4. Validation
5. Reporting

The Process of Qualitative Analysis

1. *Data Reduction*

- Reduction involves careful reading of the recorded material, identification of the main themes of the studied process, behaviour, etc. and categorising of the material for the purpose of analysis.
- Summarising, coding and categorising are some ways of data reduction.
- Data reduction should be guided primarily by the need to address salient monitoring and evaluation questions.
- This selective winnowing is difficult because qualitative data can be very rich.

2. Data organization

- This stage involves categorising information in more specific terms as per your indicators of activities/progress, outputs, effects and impacts
- Coding is one of the key ways of organizing data into themes or categories

3. Interpretation

- This involves making decisions and drawing conclusions related to the evaluation questions and objectives.
- Identifying patterns and regularities, discovering trends and explanations are aspects of this process, which will allow the development of some firm views.
- This process will continue until **saturation** has been achieved.
- More data can be collected, organized, interpreted until a conclusion can be reached.

Interpretation of QA

- Clustering- Events and processes that have similar patterns or characteristics must be sorted in categories and grouped together
- Noting relationships between variables provides a sound basis for drawing conclusions about the data.

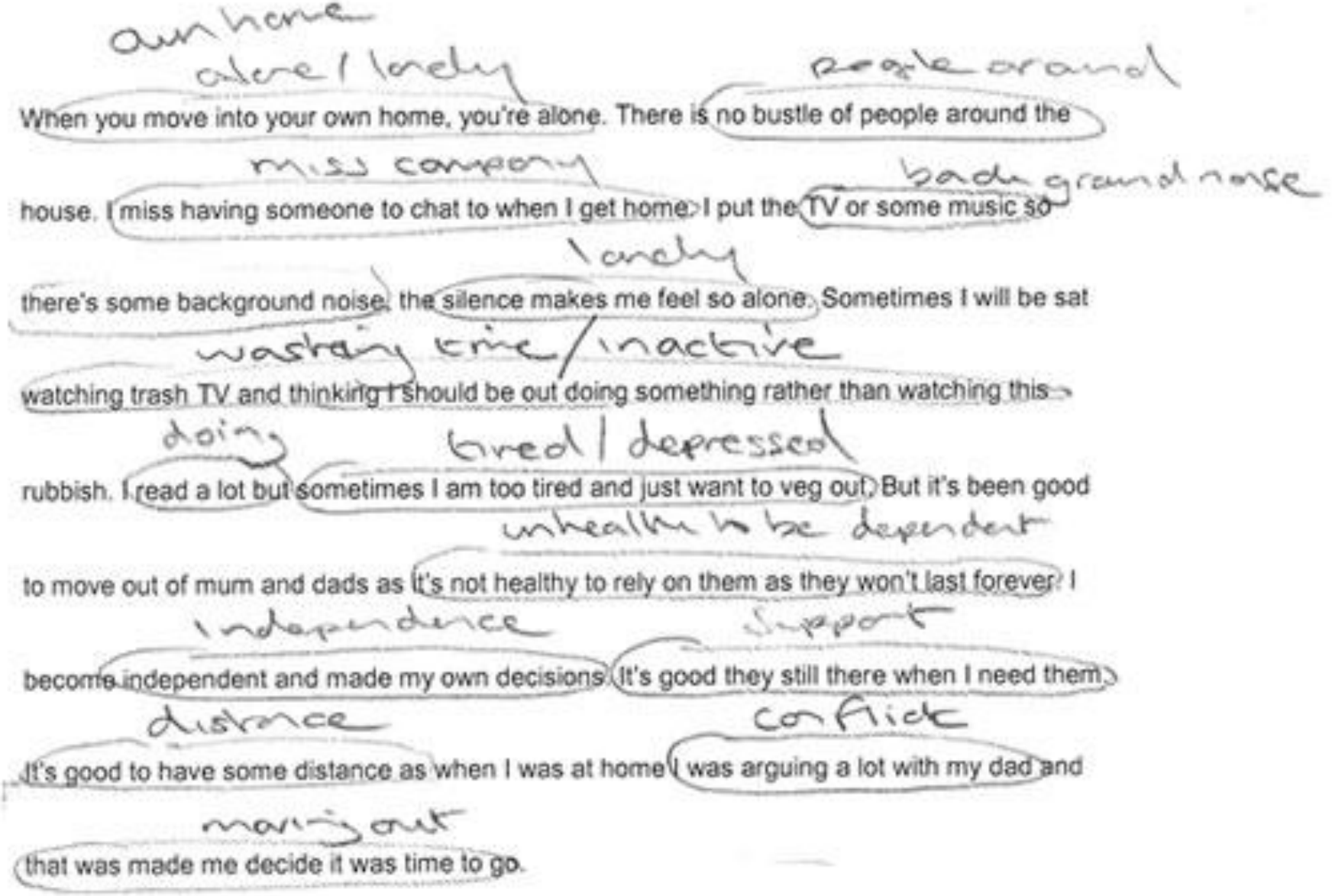
4.Validation

- A process to ensure that both participants and facilitators agree on the analysis of local conditions.
- Validation should occur at the end of every discussion by the facilitator summarizing the key points
- Also achieved by comparing the learning's from other groups

Coding qualitative data

- What is a code
- Why is coding important
- How do we code qualitative data
  - Codes for open ended answers
  - Codes for data from focus group discussions , key informant interviews, video and radio transcripts
    - Most typically, when coding, analysts have some codes already in mind (priori coding) and in subsequent analysis they look for other ideas that seem to arise out of the data

Descriptive coding and notes



The Process

- The analyst has read the text carefully and circled what seem to be key terms or key events or actions.
- A short note of what these are has been written besides the circling.
- These are the start of descriptive, or what grounded theorists refer to as open coding.
- An initial coding list from this might be:

  Own home
  Lonely
  Independence
  Moving out of parents
  Conflict
  Dependence
  Desire for company

- These terms summarise the events and actions noted by the coding some are more analytical, i.e. not merely describing something that happened or was said.
- They could form the start of a coding list that could be used to mark-up the rest of this transcript and other similar cases.

Displaying qualitative data/data interpretation

- Matrices facilitate data analysis considerably.
  - They are the most common form of graphic display of qualitative data.
  - They can be used to order and compare information in many ways, for example, according to:
    - time sequence (of procedures being investigated in different periods, for example),
    - type of informants (as in the example above), or
    - location of data collection (to visualise differences between rural and urban populations).

Data matrix for Campus A: What was done to share knowledge

Respondent group	(a) Activities named	(b) Which most effective	(c) Why
Participants	•Structured seminars •E-mail •Informal interchanges •Lunchtime meetings	•E-mail •Structured seminars	•Concise way of communicating a lot of information
Non-participants	•Structured seminars •Informal interchanges •Lunchtime meetings	•Informal interchanges •Structured seminars	•Easier to assimilate information in less formal settings •Smaller bits of information at a time
Department chair	•Structured seminars •Lunch time meetings	•Structured seminars	•Highest attendance by non-participants •Most comments (positive) to chair

Diagrams

- Diagrams, like matrices, can be of great assistance in providing an overview of the data collected and in guiding data analysis.
- A DIAGRAM is a figure with boxes containing variables and arrows indicating the relationships between these variables.

Flow charts

- FLOW CHARTS are special types of diagrams that express the logical sequence of actions or decisions.
- Flow charts are especially useful to summarise different flows of events that are mutually connected.

REPORTING QUALITATIVE

- One way is summarising the major qualitative results in a separate section of the findings, with examples and quotations, following the objectives that guided the collection of this particular data.
- The results would then be discussed in the chapter 'Discussion', together with the results of other more quantitative data collection tools and would subsequently be reflected in the summary of the findings and the recommendations.

STRATEGIES FOR TESTING OR CONFIRMING QUALITATIVE FINDINGS TO PROVE VALIDITY

1. **Check for representative-ness of data.**

- Check whether you have indeed interviewed all categories of informants needed to get a complete picture of your topic (not relying excessively on talkative authorities).
- Make sure that you do not generalise from unrepresentative events.

2. Check for bias

STRATEGIES FOR TESTING OR CONFIRMING QUALITATIVE FINDINGS TO PROVE VALIDITY

3. **Cross-check data with evidence from other, independent sources.**

- Actively cross-checking data, looking for independent evidence or counter-evidence, is one of the most important ways to enhance validity .
- **For example**, answers of husbands and wives (and other informants concerned) should confirm each other on such issues as who decides whether and what family planning methods should be used, who decides whether daughters should be circumcised, or what has changed in husband-wife relationships after the diagnosis of leprosy or another feared disease in one of the spouses.

STRATEGIES FOR TESTING OR CONFIRMING QUALITATIVE FINDINGS TO PROVE VALIDITY

4.Compare and contrast data.

- If we want to be sure, **for example**, that variable A (high level of education) influences variable B (use of family planning methods) we have to compare a group of mothers with high education to a group of mothers with low education on their use of family planning methods.
- Comparing and contrasting data is important if you are attempting to **identify** your variables as well as to **confirm** associations among variables.

STRATEGIES FOR TESTING OR CONFIRMING QUALITATIVE FINDINGS TO PROVE VALIDITY

5.Do additional research to test the findings of your study.

- The results of your study may be so intriguing that you decide to do a follow-up study afterwards.
  - Such a study may be undertaken for several reasons:
    - to replicate certain findings,
    - to rule out (or identify) possible intervening variables,
    - to rule out rival explanations by investigating them, or
    - to look for negative evidence.
- Additional studies undertaken for one or more of these reasons may serve to make the results of your original study more convincing.

STRATEGIES FOR TESTING OR CONFIRMING QUALITATIVE FINDINGS TO PROVE VALIDITY

7. **Get feedback from your informants.**

- This is important not only for ethical reasons or because it will improve the chances that the results will be implemented, but also because **it will improve the quality of your study design, of your data, and of the conclusions drawn from these data**.
- Suggestions and additional information collected during feedback sessions will invariably increase the quality of your research report.

Summary points

- Qualitative research produces large amounts of textual data in the form of transcripts and observational field-notes
- The systematic and rigorous preparation and analysis of these data is time consuming and labour intensive
- Data analysis often takes place alongside data collection to allow questions to be refined and new avenues of inquiry to develop

Summary points

- Software packages can help with analysis but should not be viewed as short cuts to rigorous and systematic analysis
- High quality analysis of qualitative data depends on the skill, vision, and integrity of the researcher; it should not be left to the novice

Practical Advice in Conducting Qualitative Analyses

- **Start the analysis right away and keep a running account of it in your notes:**
- Analysis should begin almost in tandem with data collection, and that it is an iterative set of processes that continues over the course of the field work and beyond.
- It is generally helpful for field notes or focus group or interview summaries to include a section containing comments, tentative interpretations, or emerging hypotheses.

Leave enough time and money for analysis and writing:

- Analysing and writing up qualitative data almost always takes more time, thought, and effort than anticipated.
- A budget that assumes a week of analysis time and a week of writing for a project that takes a year's worth of field work is highly unrealistic.
- failing to build in enough time and money to complete this process adequately is probably the major reason why evaluation reports that include qualitative data can disappoint.