QUALITATIVE ANALYSIS: COMMON ASPECTS OF INTERPRETING DATA

María Arantzamendi (RN, MSC, PhD)

ATLANTES Global Observatory of Palliative Care
Institute for Culture and Society
University of Navarra

E-mail: marantz@unav.es

OrcidID: 0000-0003-2406-0668

OBJECTIVES

- **Overall objective**: To reflect on the definition and meaning of data analysis in qualitative research

- **Specific objectives**:
  - To understand the common aspects of qualitative data analysis processes
  - To understand that there are different types of data analysis

QUALITATIVE DATA ANALYSIS

What's on the outside doesn't always show what's on the inside

WHAT IS DATA ANALYSIS

- It's **sorting** and **making sense** (finding meaning) of data for a purpose

    - purpose: to answer/address a research question

    - involves reduction, abstraction, decontextualization

- Data provide a **doorway to something else** – bigger understanding of something else that we get to by coding, and asking questions

CHARACTERISTICS OF QUALITATIVE ANALYSIS

- It's a back and forth process
- It's mainly **inductive**
- Data collection and analysis happen **more simultaneously**
- Aim: to reflect the complexity of the phenomenon under study and to present the **underlying structure** that **gives meaning to the complexity**
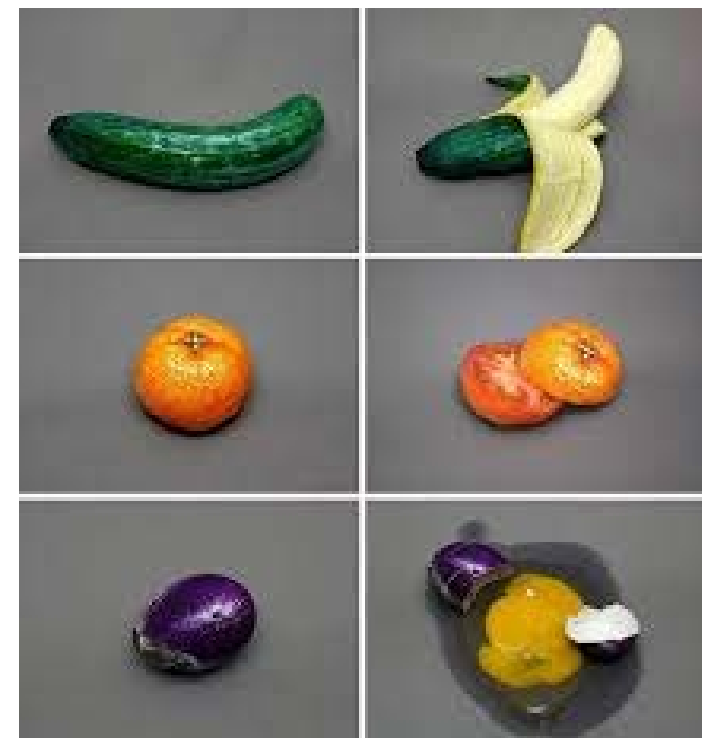
COMMONALITIES OF THE QUALITATIVE PROCESS ANALYSIS: 4 STEPS

1. Comprehending

2. Synthesizing

3. Theorizing

4. Recontextualizing

Intellectual process

Write memos

1. Comprehending

- It's about **grasping** with the mind, the **nature**, **significance**, **meaning** of something.

  - It's easiest when: you have done some or all of the data collection/interviews; you have transcribed some or all of the interviews

  - It requires **reading with purpose**

  - It needs developing and recording your ideas and discoveries in the form of memos

+ Striving to make sense of the data
+ Finding out what is going on
+ Researcher able to describe the phenomenon comprehensively
+ Data 'saturation'

2. Synthesising

- **Sifting** important from unimportant

- **Merging** data to make a composite pattern (something that accurately captures a commonality across stories)

- Includes **range and variation** of the pattern (e.g., behavior)

- Arrived? – confident description of how people behave (e.g., when suffering)

   + 'Sifting' the data and assembling the pieces.

   + What is typical of the phenomenon: First generalised statements about the phenomenon.

3. Theorizing

- It's about **making sense of the data**:
  - **making meaning that best fits the data**
  - **linking diverse** and seemingly **unrelated facts**

- Theory is a way of revealing the obvious, the implicit, the unrecognized, the unknown

+ Systematic classification of data

+ Researcher formulates different explanations of the phenomenon

  and maintains them until it is determined whether they fit the data

+ Until the best and most concise explanation is obtained

Risk: to take our conjecture/theorizing as fact and to get wedded to one theory too early

4. Recontextualizing

- Putting the analysis (theory) back into context so it can be useful in other settings

- Work of other researchers and established theory plays a critical role

- Here the link is between new knowledge and established knowledge

- Develop the theory further: explore its application to other groups or settings

QUALITATIVE ANALYSIS TERMINOLOGY

- **Unit of analysis**

- **Meaning unit**: a set of related words or phrases with the same meaning

- **Code**: the label/denomination of a meaning unit

- **Category**: a group of content that shares commonalities
  - It is like a thread that binds codes together

- **Theme:** an expression of latent content

(Graneheim & Lundman 2004)

CODING: THE ANALYSING PROCESS

- It's getting from **unstructured and messy data** to **organized ideas** about what is going on in the data

- It's a central process in data analysis that involves **sorting** the piles of data by **identifying persistent** words, phrases, concepts (**ideas**)

- **Cyclical process** and generating new ideas; need to check them out in past data (**inductive/deductive** turn)

- **Every** qualitative researcher codes

- It involves **sorting** the piles of data by **identifying persistent ideas**

- **Labelling**, and **uncovering** underlying meaning

- **Joining** similar things to make groupings: **categories**

- It's **linking**

- **How** you code depends on the method you use

- When codes are stable, organize into a coding framework

Analytic coding

- Helps you develop themes or categories

- Happens through asking questions of the data - making concepts and theorizing about them

- Ideas move to a new level

  - Separate the data into piles or groupings

  - Determine what belonged, what did not belong, and where it belonged

  - Find patterns that are predictable

  - Label your groupings

- Memo writing serves an important role while conducting fieldwork and data analysis

- It's the process of **writing notes** or memos **about thoughts** related to the analysis of data

- It serves to assist in making conceptual **leaps from raw data to those abstractions** that explain research phenomena in the context in which it is examined

- Memos create an **interface** between the **participant's data**, the **researcher's interpretation** and **wider theory**

MEMOS

- It's recording your thoughts, reflecting on the process, keeping yourself writing and thinking about the bigger picture

  - Note things that are **especially interesting**, challenging or significant in the data (reflect why theses sections or statements stand out)
  - Record sections that are **ambiguous** and could be interpreted in different ways or don't fit neatly into existing codes or interpretations
  - Explain **why** one researchers **interpreted** or coded sources in a certain way to other researchers
  - Explain your coding and **analytical choices** (adds transparency)
  - Register how the **data either supports or challenges** a theory
  - Note the unsaid, can note the observed

TIPS FOR DATA ANALYSIS

- **Prepare the data** (make a copy, identify the data, transcribe, write field notes…)

- **Systematic management** of data is the first step of analysis

- Gives direction to data collection (e.g., gender of caregivers; don't assume you understand what is being described)

- **Data can lead inquiry** (e.g., adjusting the questions)

- Often where analysis begins; when exploring **"What's here?"**

- All that we know about an **aspect** of experience or study is organized together; enables close examination

- **Caution**: Keep labels close to the data when you begin

- **Software** can help managing data, **DON'T do the analysis**

(Froggatt 2001)

SOME TYPES OF ANALYSIS

- Content analysis

- Constant comparative analysis

- Framework analysis

Content analysis

- A set of document analysis methods and procedures that emphasises the meaning of the text

- Data content analysis to classify common or recurring themes

- Analysing descriptive-narrative data content in order to identify major themes and patterns in the data

- Data are reviewed and codes → code scheme → categories → themes are identified

- Two types:
- **'Manifest content'**: describes the visible and obvious components
- **'Latent content'**: entails an interpretation of the underlying meaning

(Graneheim & Lundman 2004)

Framework analysis

- It's a method of **content analysis** that involves summarising and classifying data within a **thematic framework**

- Matrix-based method for sorting and synthesising data

   (Ritchie et al 2003)

	THEME 1	THEME 2
Participants	Subthemes	Subthemes
P1		
P2		

Framework analysis

- **1. Familiarisation/Data management:**

- Thematic analysis to develop a coding scheme

- Indexing: applying the codes in a systematic way to the data

- Charting: reorganise the data according to thematic content

- **2. Descriptive accounts:**

- Drawing out the content and nature of themes

  (what does it include? what happens?)

- Establish typologies: more complex and refined description

- **3. Explanatory accounts:**

- Searching for relationships between codes

(Ritchie et al 2003)

Table 3. Examples of data summaries from stage 4

Theme	Good/bad practice, basis and effects		
Sub-theme	1.1 What is good practice?	1.2 What is inappropriate practice?	1.3 Basis for this judgement
Student 1	Use of alcohol handrub (page 4)	Resheathing needles (page 1)	What has been taught at university (page 6)
		Not changing gloves between patients (page 2)	
	Different coloured aprons for different tasks (page 3)		Positive role models (page 6)
Student 2	Cleaning beds between patients (page 2)	Not taking sharps bins to point of use of sharp (page 3)	NICE guidelines (page 5)
			Common sense (page 6)
	Having gloves and aprons available near beds (page 2)	Not cleaning theatre trolleys (page 4)	

(Ward et al 2013)

- It's directed towards developing new theory, explaining process that is derived from and **grounded** in research data

- **Steps:**
- **Open coding**: it's about identifying and labelling meaningful units of text
- **Axial coding**: it involves examination of each category to discover linkages, relationships, redundancy and new patterns
- **Selective coding**: it requires the reformulation of some of the categories as greater insight is achieved and conceptual abstraction

- **Core theme**

CONCLUSION

REFERENCES

- Birks M, Chapman Y & Francis K (2008), Memoing in qualitative research:Probing data and processes. Journal of Research in Nursing 13 (1): 68-75.

- Flick U (2013) The SAGE Handbook of Qualitative Data Analysis. Sage, London, UK.

- Froggatt KA (2001) Using computers in the analysis of qualitative data. Palliative Medicine 15: 517-520.

- Gibbs, Graham R. (2013) Using software in qualitative analysis. In: The SAGE Handbook of Qualitative Data Analysis. Sage, London, UK, pp. 277-295.

- Glasser BG & Strauss AL (1967) The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine.

REFERENCES

- Graneheim UH & Lundman (2004) Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Education Today 24: 105-112.

- Green J & Thorogood N (2005) Qualitative Methods for Health Research. London: Sage.

- Lyons E & Coyle A. 2016. Analysing Qualitative Data in Psychology. 3rd ed. London. SAGE Publications Ltd.

- Morse, J.M. (1994). "Emerging from the data": The cognitive processes of analysis in qualitative inquiry. From J. M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 23-43). Thousand Oaks,CA: Sage.

- Nowell LS, Norris JM, White DE, Moules NJ. (2017) Thematic Analysis: Striving to Meet the Trustworthiness Criteria. International Journal of Qualitative Methods. 16: 1-13.

REFERENCES

- Payne S. Qualitative methods of data collection and analysis. In: Addington-Hall JM, Bruera E, Higginson IJ, Payne S. Research Methods in Palliative Care. 2007. Oxford: Oxford University Press.

- Pope C; Ziebland S & Mays N (2000) Qualitative research in health care: Analysing qualitative data. British Medical Journal 320 (8): 114-116.

- Priest H; Roberts P & Woods L (2002) An overview of three different approaches to the interpretation of qualitative data. Part 1: theoretical issues. Nurse Researcher 10 (1): 30-42.

- Richards L & Morse JM. 2013. Readme first for a user's guide to qualitative methods. 3rd ed- Thousand Oaks: Sage.

- Ritchie, J; Spencer,L & O'Connor,W. Carrying out qualitative analysis. En: Ritchie,J & Lewis, J. (2003) Qualitative Research Practice: A guide for social science students and researchers. London: Sage Publications: 219-262.

- Rogers, R. (2018). Coding and Writing Analytic Memos on Qualitative Data: A Review of Johnny Saldaña's. The Coding Manual for Qualitative Researchers. The Qualitative Report, 23(4), 889-892.

REFERENCES

- Saldana, J., 2015, The Coding Manual for Qualitative Researchers, Writing Analytic Memos about Narrative and Visual Data, Sage, London.Smith J, Firth J. Qualitative data analysis: the framework approach. Nurse Res. 2011;18(2):52-62.

- Strang P. Qualitative Research Methods in Palliative Medicine and Palliative Oncology- An introduction. Acta Oncologica 2000, 39 (8): 911-917.

- Ward, D.J., Furber, C., Tierney, S., Swallow, V. (2013) Using Framework Analysis in nursing research: a worked example. Journal of Advanced Nursing 69 (11), 2423–2431.

- Woods L; Priest H & Roberts P (2002) An overview of three different approaches to the interpretation of qualitative data. Part 2: practical illustrations. Nurse Researcher 10 (1): 43-51.

This project has been funded with support from the European Commission.

This presentation reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.