

School of Nursing Sciences
University of Nairobi
Qualitative Research Seminar_PhD Students

WEEK 3: Qualitative Data Analysis

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Qualitative Analysis

What it is not

- ❖ A quantitative analysis (how many people said X, how many said Y)
- ❖ A summary of all your interviews
- ❖ Identification of causal links or associations

What it is

- ❖ Methodical
- ❖ Iterative
- ❖ Looking for: contrast, diversity, connection, themes

Steps

❖ Collect data

- ❖ Analysis can start early, or after completion of data collection
- ❖ Early start provides the researcher with possibility of identifying gaps and collecting new data

❖ Familiarization:

- ❖ Translate and transcribe the data. Read thoroughly line by line

❖ Develop the codes

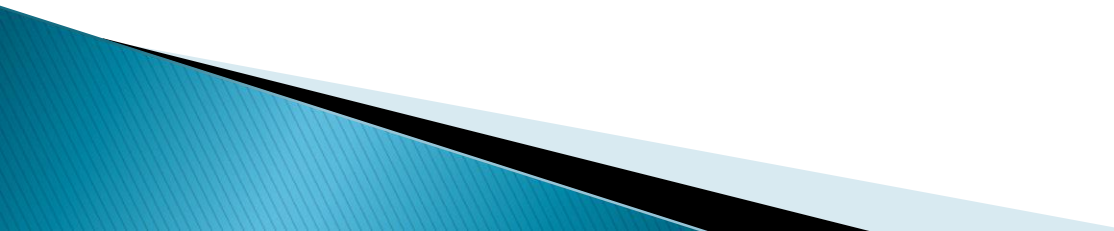
- ❖ themes

❖ Review coding and themes with other researchers

❖ Synthesize, define and name the themes

❖ Prepare the report (write up)

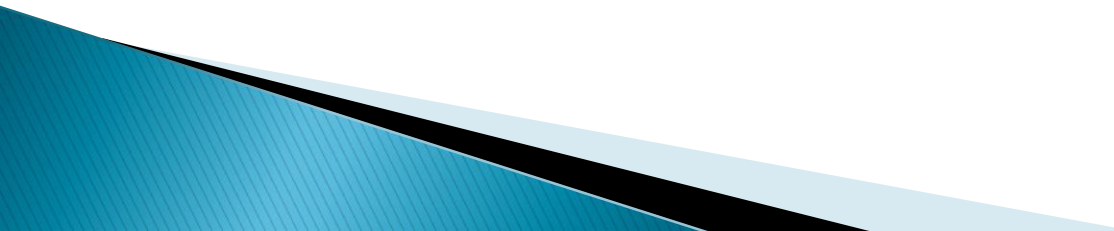
Types of Qualitative Data

- ❖ Hand written field notes from interviews
 - ❖ Tape recordings--**transcribed**
 - ❖ Notes from field observations
 - ❖ All must be processed before analysis
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Focus of Qualitative Analysis

- ❖ ...words as basic unit of analysis
- ❖ Usually hundreds of pages of transcripts
 - ❖ **Data** = written words
 - ❖ VS
 - ❖ #s in quantitative research
- ❖ The hundreds of pages must eventually be reduced

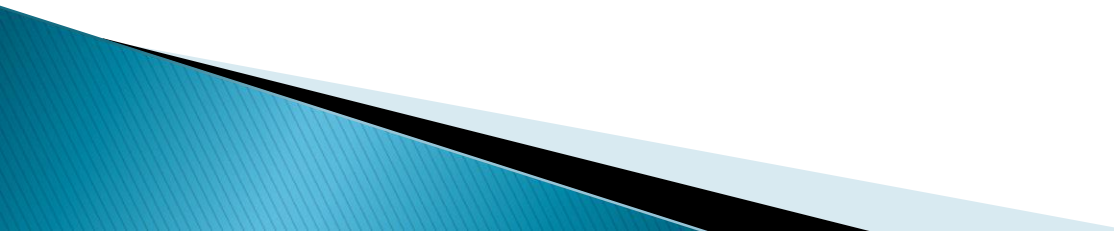
Familiarization

- ❖ The first step is to get to know your data.
 - ❖ It's important to get a thorough overview of all the data collected before we start analyzing individual items.
 - ❖ This might involve transcribing audio, reading through the text (line by line)
 - ❖ Taking initial notes, and generally looking through the data to get familiar with it
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Codes & Coding

- ❖ What is coding?
 - ❖
 - ❖ In qualitative analysis, coding is the process of perusing data for categories and meanings (themes, ideas, etc.), and then systematically marking similar strings of text with a code label
 - ❖ Coding is categorization of data.
 - ❖ A **'code'** can be a word or a short phrase that represents a theme or an idea. All codes need to be assigned meaningful titles.
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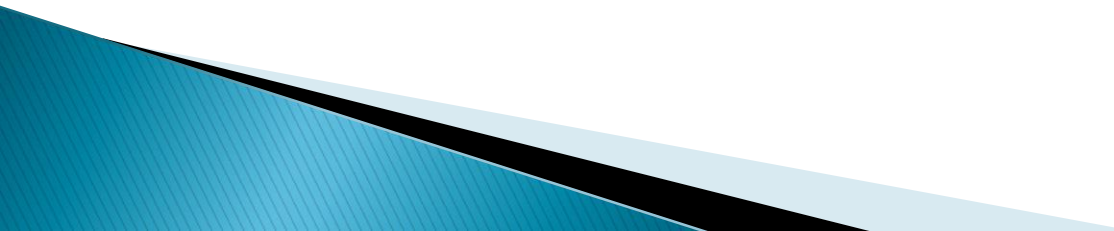
Codes & Coding

- ❖ Codes are tags or labels for assigning units of meaning to the descriptive information compiled during a study
 - ❖ Codes usually are attached to ‘chunks’ of varying size words, phrases, sentences or whole paragraphs connected or unconnected to a specific setting
 - ❖ Codes pull together a lot of materials, thus permitting analysis
 - ❖ This allows for systematic retrieval at a later stage for further comparison and analysis
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Coding

- ❖ Codes may be based on:
 - ❖ Actions, behaviors
 - ❖ Themes, topics
 - ❖ Ideas, concepts
 - ❖ Terms, phrases
 - ❖ Keywords
 - ❖ Research questions
 - ❖ Theoretical Framework

Coding

- ❖ Codes are given meaningful names that are applied to all instances of similar content.
 - ❖ Strings of text may contain more than one code.
 - ❖ When new content is discovered, a new code is created to apply to it and other similar content.
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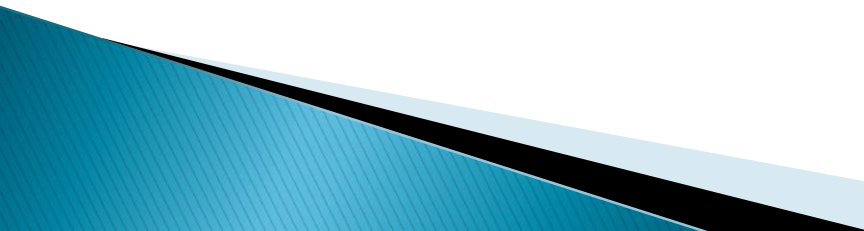
Coding

- ❖ Through analysis
 - ❖ Codes may evolve
 - ❖ The number of codes may grow as more topics or themes become apparent.
- ❖ Therefore, generate and maintain a list of codes that will help you to identify the content contained in the codes and the data set

Coding

- ❖ When coding, continually ask yourself questions about the data.
- ❖ For example:
 - ❖ What is going on (context)?
 - ❖ What are people doing?
 - ❖ Toward what are persons orienting their thoughts?
 - ❖ What do these things take for granted?
 - ❖ How does context affect the statements?

Coding

- ❖ When coding, constantly compare with previous strings of text that bear that code.
 - ❖ As one codes, and subsequent to coding, one should create a data display to manage the data (can be done in Nvivo software)
 - ❖ The researcher then generates themes by linking instances of codes with other codes.
 - ❖ The themes are formed into a narrative about the data.
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Approaches to Coding

Inductive Coding:

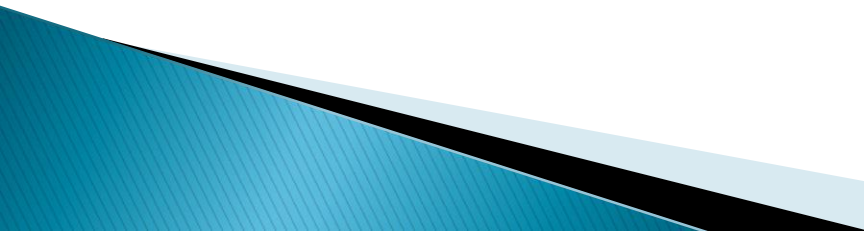
- ❖ Initial data collected, written up (transcribed) and reviewed (read line by line)
- ❖ Besides the lines/paragraph, labels (codes) are generated and a list of them grows

Deductive Coding:

- ❖ A deductive approach involves coming to the data with some preconceived themes you expect to find reflected there, based on theory or existing knowledge.

Types of Coding

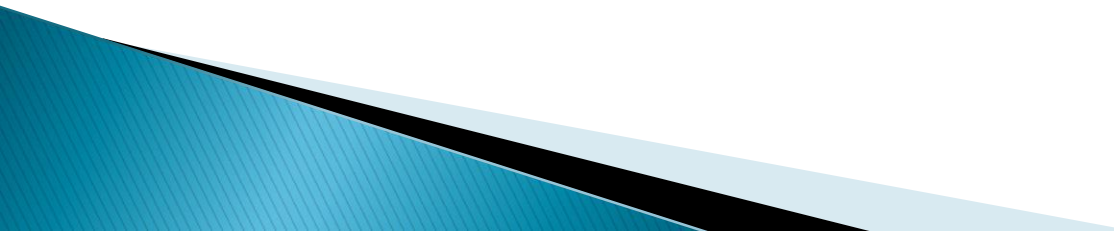
Provisional

- ❖ **Start a list of codes prior to field work**
 - ❖ The list comes from conceptual framework, list of research questions, hypotheses, problem areas and variables that the researcher brings to the study
 - ❖ **Open Coding:**
 - ❖ The initial organization of raw data to try to make sense of it.
 - ❖ **Axial Coding:**
 - ❖ Interconnecting and linking the categories of codes.
 - ❖ **Selective Coding:**
 - ❖ Formulating the story through connecting the categories.
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Revising Codes

- ❖ Codes usually change during analysis process
 - ❖ Some codes do not work
 - ❖ Too many segments with same codes—break them into sub-codes
- ❖ Coding ends when all the incidents have been classified, categories are saturated

Define Codes

- ❖ First level coding (Open coding)
 - ❖ Single term or phrase
 - ❖ Codes must be precise and their meaning shared among analysts
 - ❖ Give a code a name closest to what it is describing
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Examples:

Interviewer: How are you able to take your HIV medicines on time?

R1: my motivation to take HIV medicines are a result of being with my friends who suffer from same disease like me

R2: When I think about getting very sick because I did not take my medicines, this makes me remember not to miss

R3: The health providers care about us so much, this motivates me to take my medicines on time

These responses can be coded as: “**motivation**” OR MOT.



Coding

Interview extract

Personally, I'm not sure. I think the climate is changing, sure, but I don't know why or how. People say you should trust the experts, but who's to say they don't have their own reasons for pushing this narrative? I'm not saying they're wrong, I'm just saying there's reasons not to 100% trust them. The facts keep changing – it used to be called global warming.

Codes

- Uncertainty
- Acknowledgement of climate change
- Distrust of experts
- Changing terminology

Various phrases are highlighted in different colors corresponding to different codes. Each code describes the idea or feeling expressed in that part of the text.

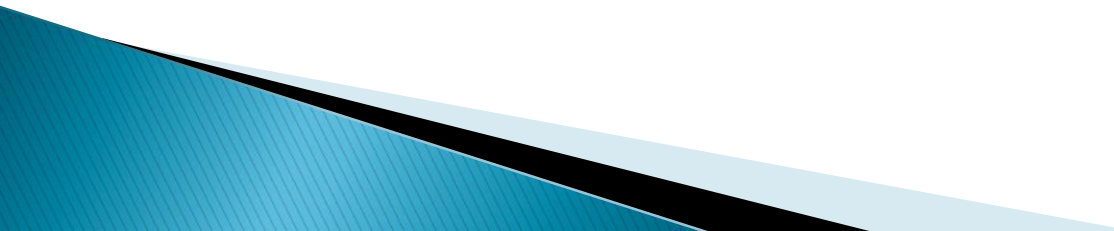
Check Coding & Code Book

- ❖ Two researchers code a few samples from the same data set (~20%)
- ❖ They discuss and compare their initial codes
- ❖ These initial codes are discussed and agreement is reached on the final codes to use
- ❖ A code book with all codes is generated for the study is prepared to guide data analysis.
 - ❖ All codes must be defined (see table with examples)

Example of a code book

Code	Definition of codes
Motivation	Code when participant explains what helps them to take meds on time
Denial	Code when the participant is in denial of their HIV status and rejects all the lifestyle changes that this diagnosis entails
Drug Holiday	Code when a participant mentions taking a drug holiday


Identifying themes, patterns and relationships

- ❖ Second level of coding (axial & selective)
 - ❖ We need to understand the patterns, recurrences and whys?
 - ❖ Pattern coding is a way of grouping first levels codes into a smaller number of sets, themes or constructs.
 - ❖ Reduce the codes into smaller numbers of constructs
 - ❖ Look for threads that ties bits of data together
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Turning codes into themes

Codes	Theme
<ul style="list-style-type: none">• Uncertainty• Leave it to the experts• Alternative explanations	Uncertainty
<ul style="list-style-type: none">• Changing terminology• Distrust of scientists• Resentment toward experts• Fear of government control	Distrust of experts
<ul style="list-style-type: none">• Incorrect facts• Misunderstanding of science• Biased media sources	Misinformation

Summarizing the data

- ❖ At this last stage you need to link research findings to research aim and objectives.
 - ❖ Identify noteworthy quotations (quotable quotes) from the transcript in order to highlight major themes within findings and possible contradictions.
 - ❖ It is important to note that the process of qualitative data analysis described here is general and different types of qualitative studies may require slightly different methods of data analysis.
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Now, let us practice coding