



Qualitative methods in Agriculture, Nutrition and Health research

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Dr Jody Harris, Institute of Development Studies, UK
Dr Thalia Sparling, IMMANA and LCIRAH, UK
Dr Rasmi Avula, IFPRI, India

Introductions / Discussion

- Participant poll
- Introductions of participants within each table
 - Name, organization, focus
- What's the main question or aspect about qualitative research that you would like to answer or understand?

Learning outcomes

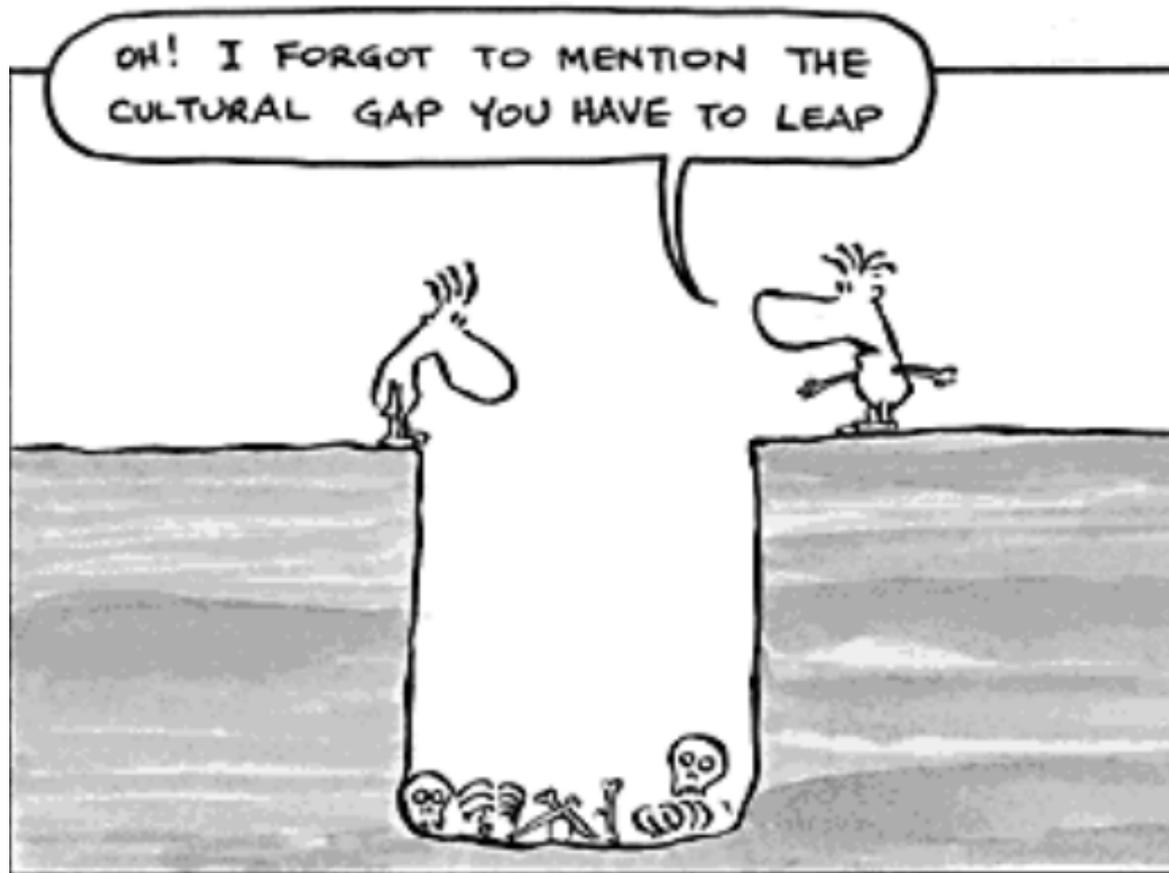
1. Learn about the foundations of qualitative methods, the different purposes and types of qualitative research, and general application to the ANH space.
2. Learn the basics of interviewing, including how to design an interview question, and different types of interviewing. Practice interviewing with a partner.
3. Learn the basics of coding an interview transcript. Practice coding and share findings with a group.

Session Plan

- Introduction to qualitative research
- Overview of qualitative methods
- Activity 1: interviewing (part A)
- Activity 2: interviewing (part B)
- Activity 3: coding a transcript
- Wrap-up and feedback

Qualitative research

- An approach to social science research
- Collects and works with **non-numerical data**
- Typically focused on the micro-level of **social interaction** that composes everyday life
- Goes direct to the source of decisions and actions – the **people** who make them
- Allows research to investigate the **meanings** that people attribute to their behavior, actions, and interactions with others
- Looks for **patterns** which illustrate broader theory of social interactions in order to generalize findings.



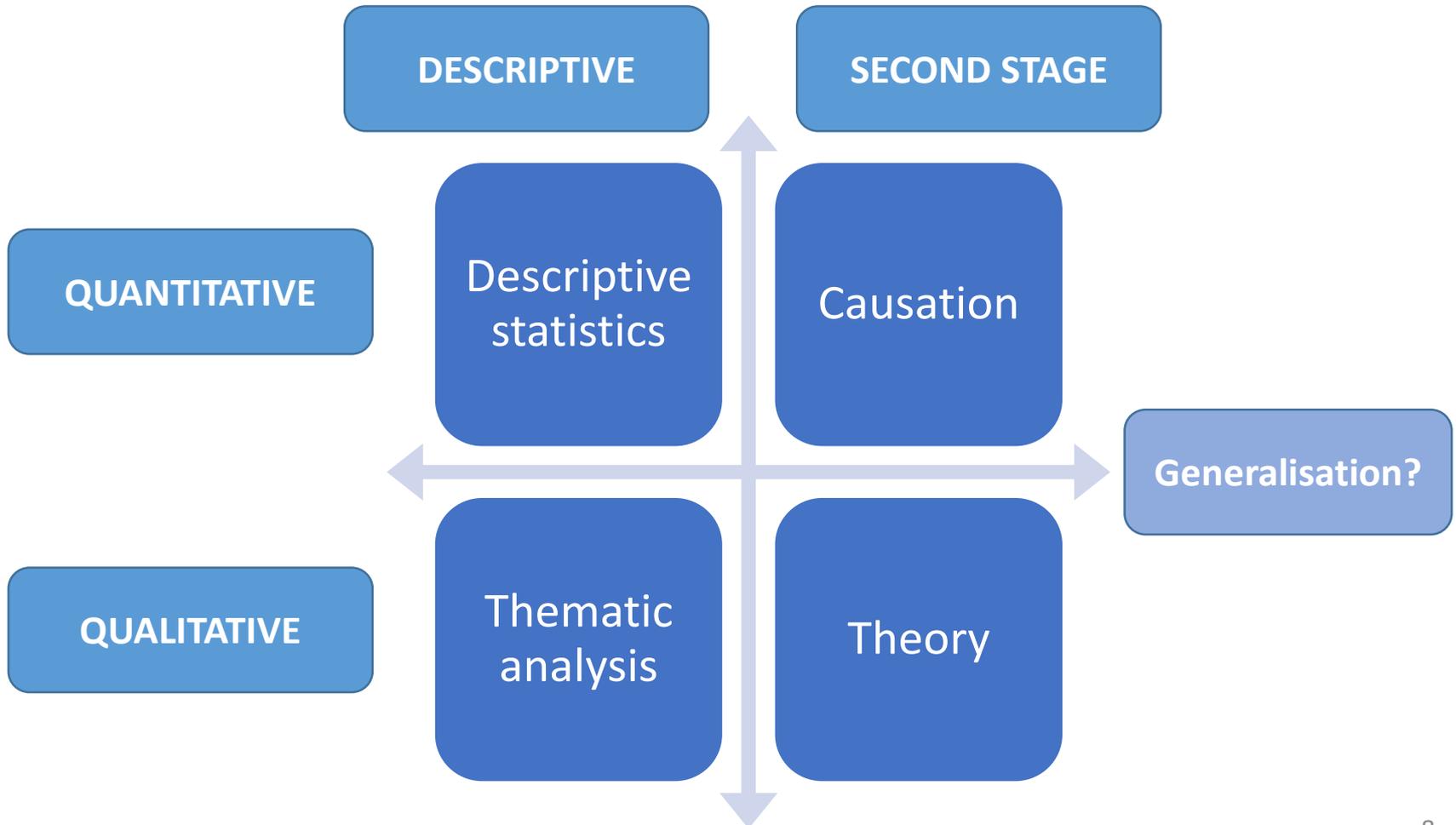
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Qualitative paradigm		Quantitative paradigm
<p>How and why events or behaviors occur in complex settings where context is important to understanding: <i>Examples: How do a diverse student body and faculty affect teaching and learning? How does a resident make the transition to attending physician? What characterizes the phenomenon of a mentor-mentee relationship?</i></p>	<p>Nature of the research question</p>	<p>How many, how often, what level, and what direction of relationships between defined variables in settings that can be decontextualized: <i>Examples: What is the relationship between student grades and graduation rates? What type and amount of monetary incentive or financial reward affects a medical student's specialty choice?</i></p>
<p>Inductive by researchers (e.g., normative or transcribed text analyzed thematically for patterns)</p>	<p>Nature of data and analysis</p>	<p>Deductive by statistics (e.g., data and patterns analyzed through statistical means)</p>
<ul style="list-style-type: none"> • Case study: An in-depth study of a particular case, which can be descriptive, explanatory, or exploratory • Ethnography: Research intended to provide descriptions of systems, processes, or phenomena within their specific context; stems from anthropology • Grounded theory: A theory developed based on the examination of data (rather than applying a predetermined theory) • Historiography: Research directed at the study of a past event, issue, or problem that uses information from the past • Phenomenology: The study of individuals' perspectives on particular phenomena • Action research: A reflective and team-based approach led by those involved in solving a particular problem • Mixed methods: A combination of quantitative and qualitative approaches including triangulation design, embedded design, explanatory design, and exploratory design 	<p>Types of designs</p>	<ul style="list-style-type: none"> • Experimental: The researcher manipulates all variables including the assignment to treatment and control groups in order to discern causality • Quasi-experimental: Research using an experimental variable with groups not formed through random assignment or selection • Surveys: Measurement procedures that involve asking questions of respondents • Mixed methods: A combination of quantitative and qualitative approaches including triangulation design, embedded design, explanatory design, and exploratory design
<p>Normative data from interviews, documents, focus groups, and/or observations</p>	<p>Data sources</p>	<p>Ordinal or cardinal data from surveys, financial reporting, census reports, test scores, demographics, and/or observations</p>
<ul style="list-style-type: none"> • Thematic analysis • Content analysis • Analysis of frequency 	<p>Analytic techniques</p>	<ul style="list-style-type: none"> • Descriptive statistics • Regression • Regression discontinuity • Hierarchical linear modeling
<ul style="list-style-type: none"> • Internal validity (e.g., through triangulation, member checking, coding check) • External validity (e.g., through representativeness check) • Reliability (e.g., through chain of evidence and interrater reliability check) 	<p>Assessment of rigor</p>	<ul style="list-style-type: none"> • Internal validity (e.g., through study design and procedures) • External validity (e.g., through criterion measurement) • Reliability (e.g., through test-retest, internal consistency)

How and why events or behaviours occur in complex settings where context is important to understanding

How many, how often, what level, and what direction of relationships between defined variables in settings that can be decontextualized

Qualitative and Quantitative



Quantitative versus Qualitative Research

Deductive and inductive reasoning

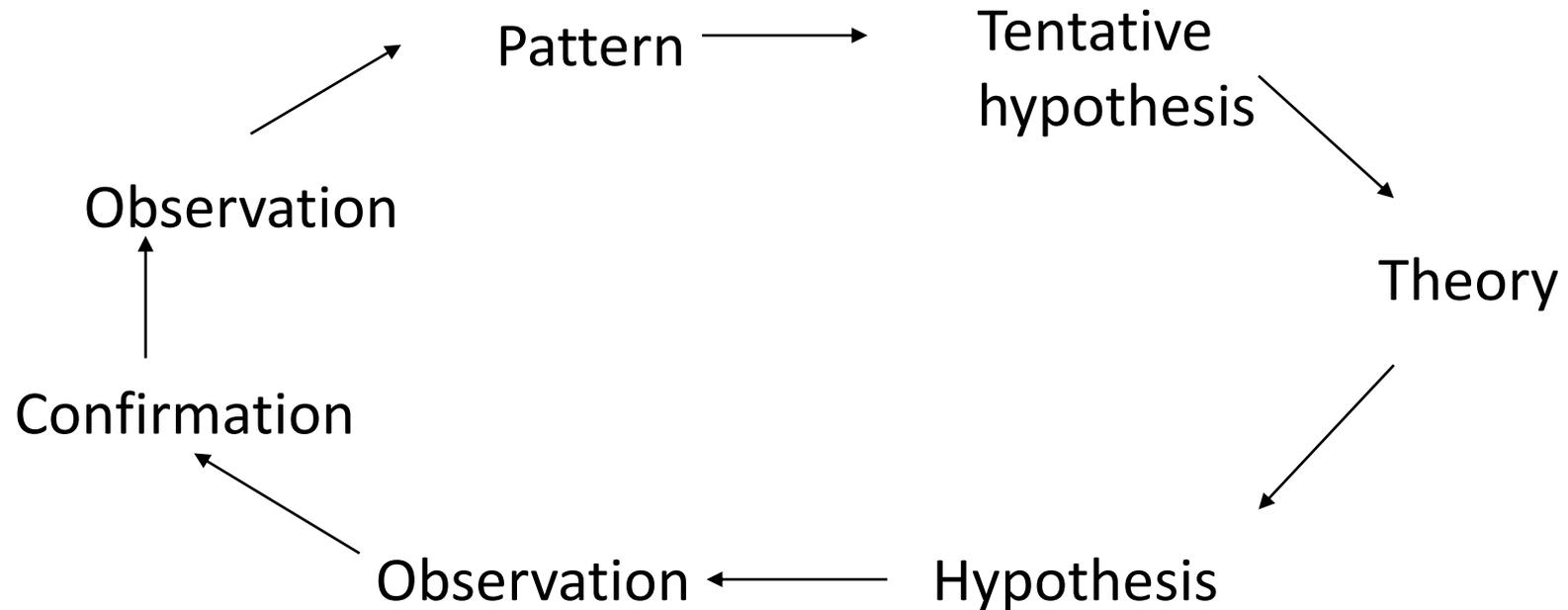
Deduction (typically quantitative):

Theory → Hypothesis → Observation → Confirmation

Induction (typically qualitative):

Observation → Pattern → Tentative hypothesis → Theory

Combining inductive and deductive approaches



Questions to help evaluate the validity of qualitative research

- **Is the sample used in the study appropriate to its research question?**

Purposive – who is more important than how many. Transparency: reasoning, background. Data saturation.

- **Is the data collected appropriately?**

Appropriate methods for the research question. Clearly explained. Systematically conducted. Thick description (context). Triangulation between several different methods and/or participants.

- **Is the data analysed appropriately?**

Clear, systematic analysis appropriate to data and approach (not quantified).

- **Can the conclusions be transferred to wider settings?**

Generation/furthering of theory. Use of relevant wider literature (e.g. topic/phenomena, method, region). What does it add to existing work and understandings? Implications and applicability (e.g. policy).

- **Does the study adequately address potential ethical issues, including reflexivity?**

Recognition of impact of researcher (presence, power, association, etc.). Negotiated consent and co-creation of data. Confidentiality and anonymity.

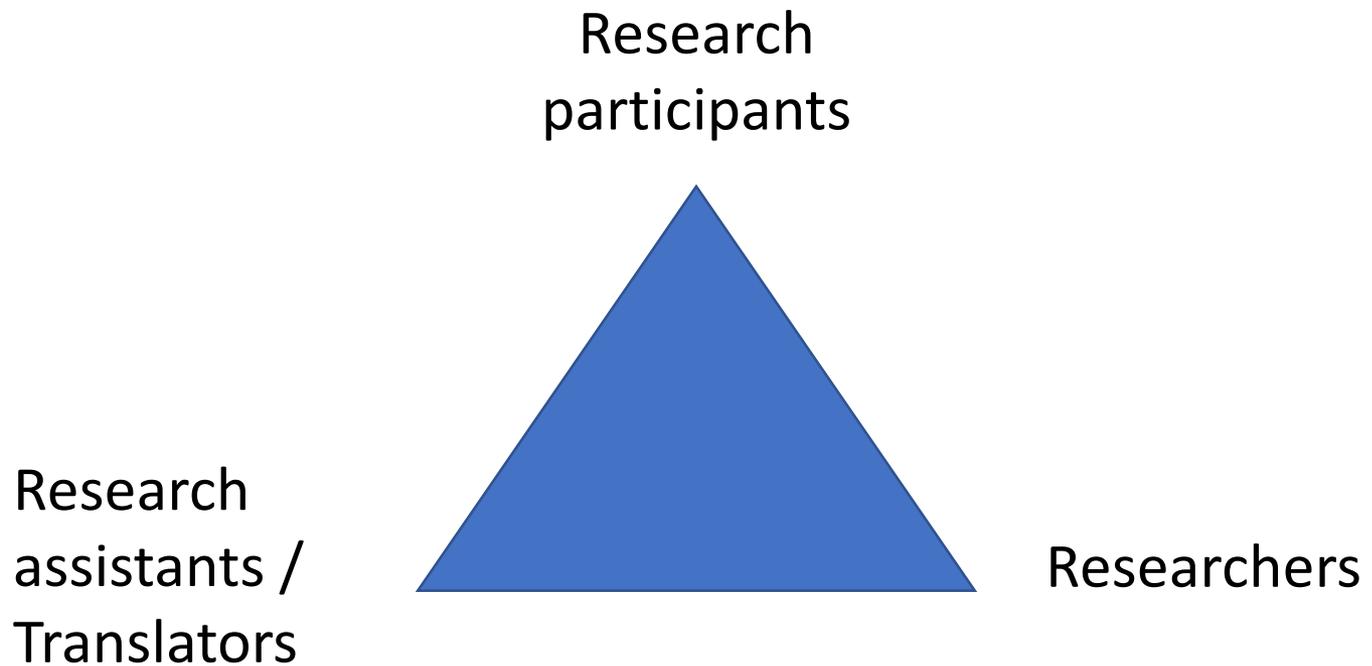
- **Overall: is what the researchers did clear?**

Transparency and reason. Clear descriptions of what done, how and why. Nuances.

Data collection approaches

- In-depth interview
- Semi-structured interview
- Direct observation / Participant observation
- Focus groups
- Key informant interview (could be IDI or semi-structured)
- Highly structured (surveys, not usually used in qual research)
- Field memos

Considerations: Relationships and power dynamics Reflexivity



Why use qualitative research methods?

- Many complex research problems (especially food) require it
- Fuller picture of complex problems
- Adds depth to quantitative research (Q²)
- Accessibility
- Capturing participant's point of view
- Potential for genuine participation

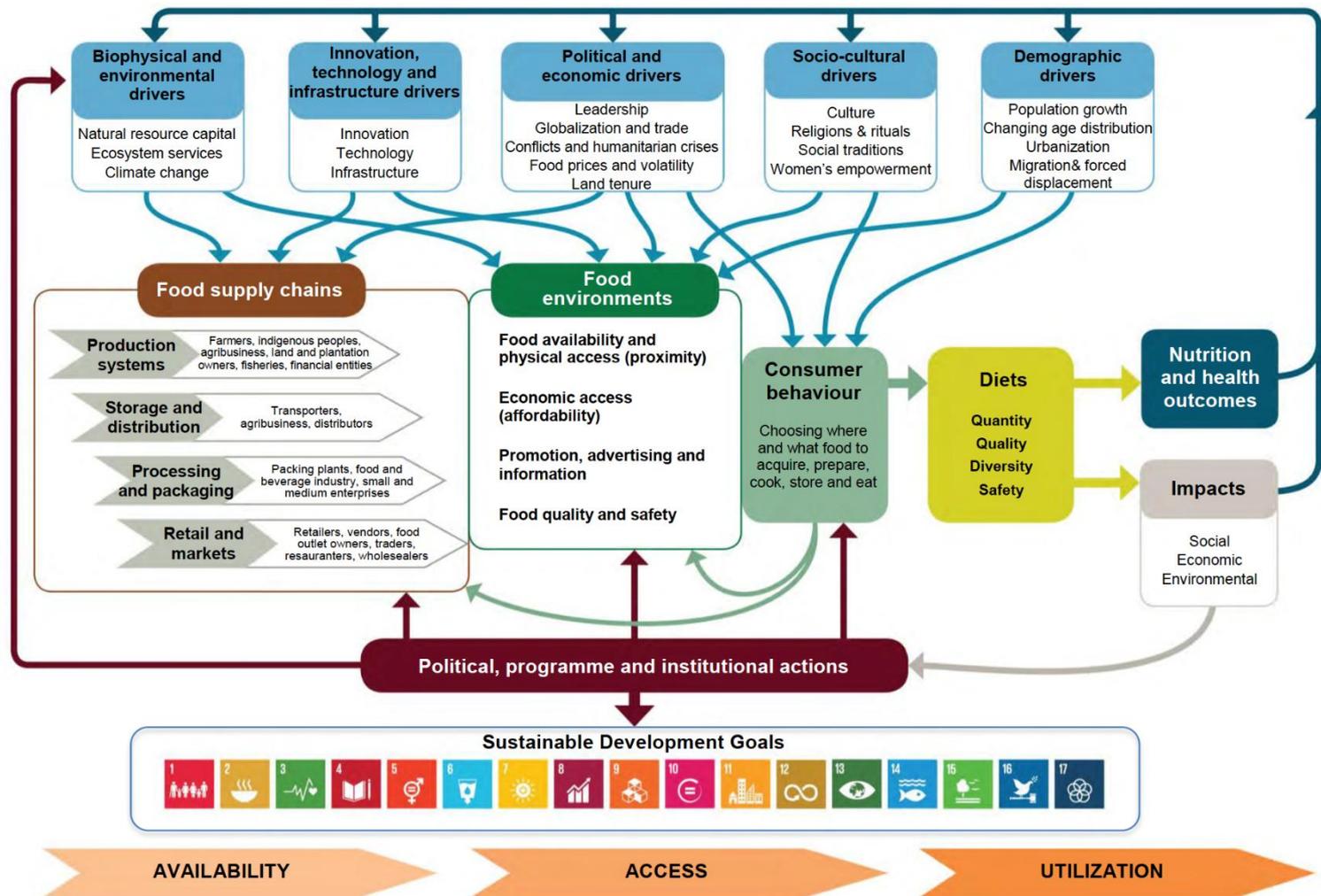
Considerations and Challenges

- Unearths inconvenient and messy truths
 - Time, logistics, and resources
 - Sampling and representativeness
 - Replicability
 - Inadequate to capture magnitude of phenomena
-
- But... mixed methods can address many of these and combined, both methods can strengthen the other

Research ethics

- Protecting research participants and honouring trust
- Anticipating harm
- Avoiding undue intrusions
- Negotiating informed consent
- Right to confidentiality and anonymity

Figure 1 Conceptual framework of food systems for diets and nutrition



Questions?

Clarifications?

Activity One

Interviewing

To understand a person's world,
talk to them!



Qualitative interviewing

- Conversations on life in a professional form
- Has structure and purpose; beyond the spontaneous
- Careful questioning... and listening! Really hear the responses.
- Interviewees are given space to expand accounts of their experiences and feelings
- No common procedure; interviewing as a craft and an art....
- but several common processes and stages to the method.

Types of interview

- Structured interviews
 - Asking the same set of standardised questions
 - Getting responses in predetermined categories to (dis)confirm hypotheses
 - Useful to make comparisons between responses from different interviewee
- Semi-structured interviews
 - Allowing for the exploration of emergent themes and ideas
 - Scope for pursuing and probing for novel, relevant information
- Unstructured interviews
 - Not simply answering the questions posed by the interviewer
 - Freedom to tell their own story or biography
 - Concerned with finding meanings, and attempts to develop a detailed biography with the interviewee

Semi-structured interviews

- Knowledge is gained from the **interviewee's view point**
- Research data comes from the **interaction** between interviewee and researcher
- Need to interpret information in **context**
 - Location of interview; degree of ease; how questions were asked and answered
- Key skills:
 - Remaining open to emerging issues and surprises, and following these... and then getting back to your interview schedule
 - Having knowledge about the interview topic to allow broad scope... but not imposing your own assumptions or leading the responses

Balance....

Types of interview questions

- Degree of focus
 - ‘Grand tour’: General overview
 - Specific: ‘please tell me more about... ’
- Degree of open-endedness
 - Open-ended: ‘How do you feel about...?’ To discover perceptions
 - Closed: ‘Do you agree with the idea that...?’ To confirm findings
- Types of information
 - Descriptive: ‘Could you tell me what happened when...?’
 - Structured: ‘What factors do you think are involved in...?’
 - Contrast: ‘What changes have you seen since...?’
 - Clarification: ‘Can you clarify what you mean by...?’
 - Follow-up: ‘Can you tell me more about...?’

Interview procedures

- Establishing relationships: Putting the interviewee at ease
 - Communication of aims, asking permissions, sensitivity to body language...
- Using the interview schedule
 - This is generally a reminder, not a list; be flexible and iterative...
 - Know your schedule well, so you don't have to refer to it often
- Following leads
 - These might be body language or verbal; be sensitive but get below the surface and uncover new ideas and areas
- Capturing data
 - Most researchers use audio recorders for later transcription
 - Depending on the context, taking notes might be appropriate

Exercise 1

Research question:

Why do people make certain food choices?

Create an interview schedule to address this question

- Work alone (for now)
- Develop 3-5 interview questions
- Think about how to frame the questions, potential for misunderstandings
- Frame your questions so they explore, rather than lead
- Include a range of types of interview questions, not just facts...

Exercise 2

Research question: **Why do people make certain food choices?**

Undertake an interview to pilot your interview schedule

Round 1:

- Get into pairs:
 - one is the interviewer, the other interviewee
- Ask/answer the 3-5 interview questions from the schedule
- Do not veer from the 3-5 questions (no additional follow-up questions, etc.)

Exercise 2

Round 2:

- Same pairs and interviewer/interviewee
- Ask the first question from your schedule
- Turn over/close your schedule so that you cannot see the remaining questions
- Listen carefully to the answers of your interviewee and ask follow-up questions based purely on their responses

Remember to listen and follow up:

- Listen for emotions, perceptions, and 'don't knows'
- Encourage further, deeper responses, e.g. *that's interesting, can you tell me more about that/why that is...*
- Interviewee: While answering, think about how well the questions are working, what is harder or easier to answer or engage with...

Exercise 2

Feedback, Reflection and Discussion

In your pairs, compare the experiences of the two interview rounds

- How did it feel as the interviewer/interviewee?
- How did it differ between the two? How did you feel?
- What kinds of data did you capture?

Activity Two

Coding

Qualitative Data Analysis

- Most qualitative understanding entails textual analysis
- Though there are other visual ways of capturing qualitative information
- You will not use all of your data
- Based on your research question, identifying the data that really helps you answer the question (s)
- What are we coding?
 - Stories
 - Personal experiences
 - Descriptions of places, events, people
 - Questions
 - Silences
 - Contradictions

Data analysis

Coding

- Open coding: read data line-by-line to identify and formulate any and all ideas, themes, or issues they suggest, no matter how varied and disparate
- Focused coding:
- Identify recurring codes from open coding and return to the data to for a more focused analysis
- Apply these codes to a larger body of data
- Helps move from codes to categories

Codes, Categories and Themes

- A code is a word or short phrase that systematically assigns a summative or essence-capturing idea or concept to the data;
- Different approaches to coding:
 - Starting with a code list and finding phrases or paragraphs in the data that fit
 - Starting with the data and creating codes to summarize or capture the interesting ideas in the data as you read
 - *in vivo* coding: a word or phrase from the data becomes the code
- Categories are groups or families of codes that share some characteristic or are logically related
- Themes: abstract analytical or logical outcomes from codes and categories (patterns, trends, concepts)

Types of codes: Topical

- Topical

- Indicates the existence of a topic, theme

Ex. “I was supposed to go to the clinic last Tuesday, but I didn’t go. I decided to stay home. I lost my job so I don’t have health insurance and can’t afford to pay.
{insurance}

- Indicates the topic “insurance” was mentioned
- Does not indicate what was said about insurance

Types of codes: Hierarchical

- Hierarchical codes
 - Classify the topic with more precision
 - Need to be careful not to get too precise and develop too many codes

Ex. “I was supposed to go to the clinic last Tuesday, but I didn’t go. I decided to stay home. I lost my job so I don’t have health insurance and can’t afford to pay.
{insurance_health}

Hierarchical codes

- Infant feeding
 - Ex:
 - Breastfeeding
 - BF_barriers
 - BF_facilitators
- Complementary feeding features
 - Ex.
 - Complementary feeding
 - CF_diversity
 - CF_frequency
 - CF_taboos

Interpreting

- Starting to make sense of the data
- Forming larger meaning of what is going on in the data
- Relating your findings to a particular construct or idea

Using matrices, tables

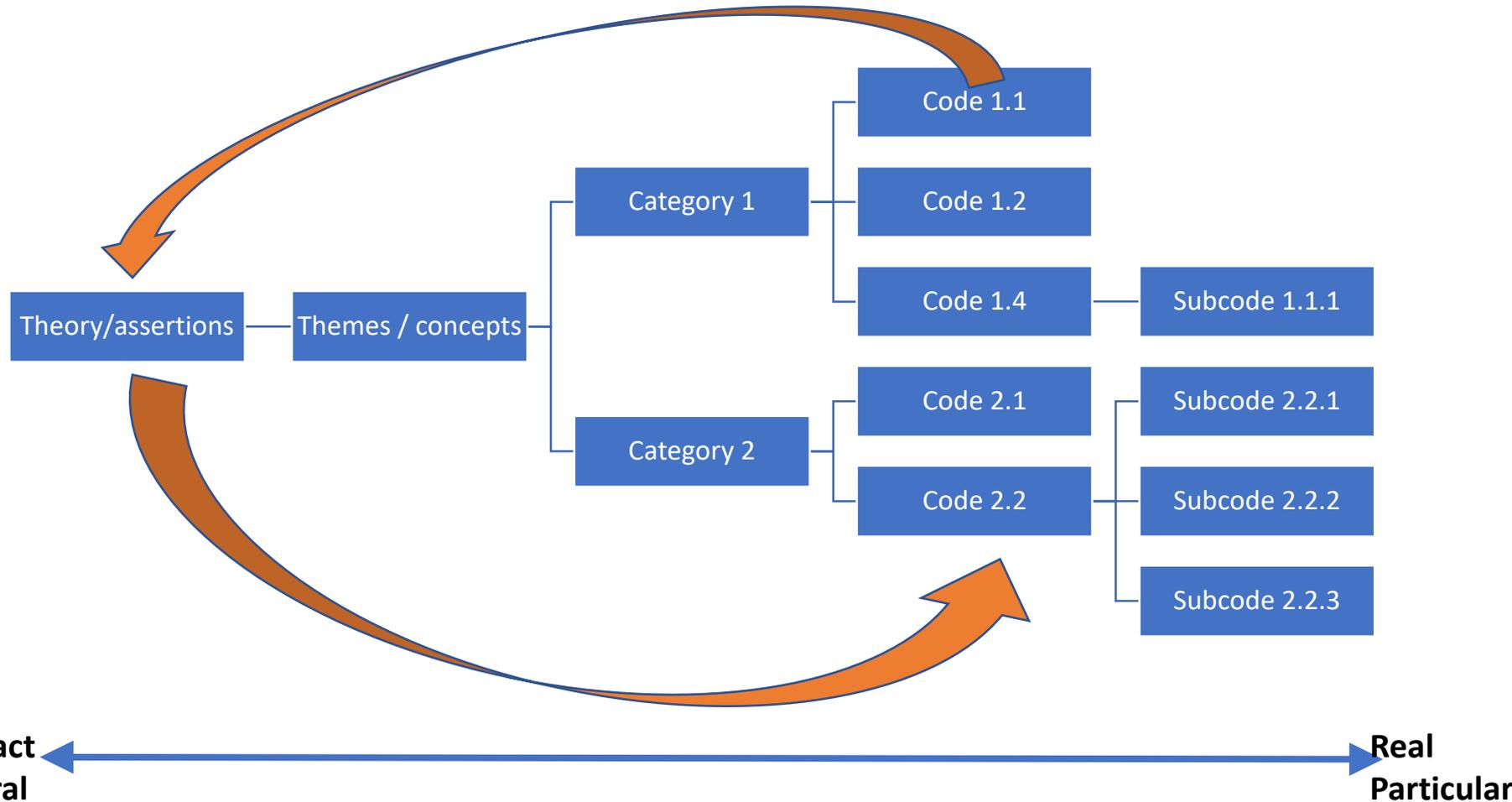
- Visual image of the data and codes and categories that have emerged through the analysis
- Compare sub-groups in your study population based on key codes or themes of interest

Memo writing

- Intermediate step between coding and writing up manuscript
- Useful tool to avoid getting lost in your data
- Go from individual cases to seeing patterns
- Use memos to break down your categories and figure out which ones are “major”
- Start making links between categories to develop your theory
- Theoretical proposition: an *explanation* of an aspect of social life that has been observed and recorded

Coding generates the bones of your analysis...integration will assemble those bones into a working skeleton

(Charmaz 2006, p. 45)



How can data analysis software help?

- NVivo is the most widely used programme for qualitative data analysis
- It is a data management tool
- It allows you to code, categorise, search and retrieve data

- But... it cannot analyse the data or generate theory. This must be done by you!

Exercise 3: Coding

- Read through Transcript 1.
- Start with open coding. Write a word(s) that captures each concept that you read. These are your codes.
- From your codes, look for patterns. Organize important codes into categories: 3-5 words or phrases that you think are interesting, summative or otherwise relevant to highlight.
- Highlight/circle text and note the corresponding code. As you go, as new codes arise, you can code for those too.
 - STOP! Listen for instructions...

Questions? Clarifications?

Conclusions



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Thank you!

Further reading

Qualitative methods – General Core Books

- Charmaz K (2014) *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. SAGE Publications.
- Chrzan J & Brett J (2017) *Research Methods for Anthropological Studies of Food and Nutrition*. New York, Oxford: Berghahn.
- Denzin NK & Lincoln YS (eds.) (2000) *Handbook of Qualitative Research*. London: Sage.
- Lune H & Berg B L (2016) *Qualitative Research Methods for the Social Sciences*. Pearson.

Further reading

Useful Articles/Chapters

- Braun V & Clarke V (2006) “Using thematic analysis in psychology”, *Qualitative Research in Psychology*, 3 (2): 77-101.
- Denzin NK & Lincoln YS (eds.) (2000) *Handbook of Qualitative Research*. London: Sage.
- Lune H & Berg B L (2016) *Qualitative Research Methods for the Social Sciences*. Pearson.
- Mays N & Pope C (1995) “Rigour and qualitative research”, *The BMJ*, 311: 109-12.
- Ritchie J & Spencer L (1994) “Qualitative Data Analysis for Applied Policy Research”, in Bryman A & Burgess B (Eds) *Analyzing Qualitative Data*. Routledge, London. Pages 305-329.

Research Ethics

- <https://www.theasa.org/ethics.shtml>