

Welcome to Qualitative Research

Week 6

Lecture 1

Data Analysis and Interpretation

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Data Analysis and Interpretation

- Data analysis
 - An attempt by the researcher to summarize collected data.
- Data Interpretation
 - Attempt to find meaning
- How do these differ by research tradition?
 - Qualitative
 - Quantitative

Data Analysis During Collection

- Analysis not left until the end
- To avoid collecting data that are not important the researcher must ask:
 - How am I going to make sense of this data?
- As they collect data researchers must ask:
 - Why do the participants act as they do?
 - What does this focus mean?
 - What else do I want to know?
 - What new ideas have emerged?
 - Is this new information?

Data Analysis After Collection

One way is to follow three iterative steps

1. Become familiar with the data through
 1. Reading
 2. Memoing
2. Exam the data in depth to provide detailed descriptions of the setting, participants, and activities.
3. Categorizing and coding pieces of data and grouping them into themes.

Data Analysis After Collection

Summarizing

- Reading and memoing
 - Read write memos about field notes.
- Describing
 - Develop comprehensive descriptions of setting, participants, etc.
- Classifying
 - Breaking data into analytic units.
 - Categories
 - Themes

Data Analysis Strategies

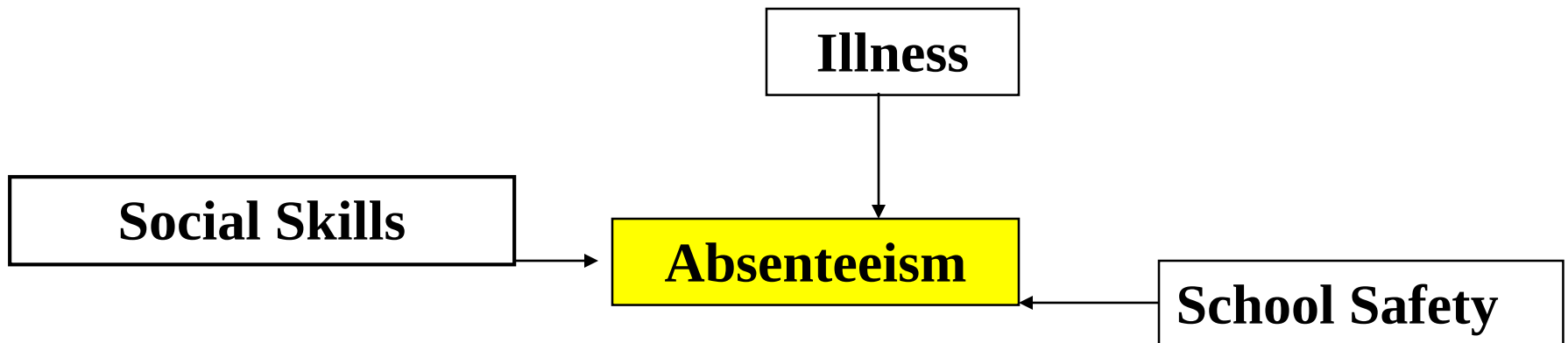
- Identifying themes
 - Begin with big picture and list “themes” that emerge.
 - Events that keep repeating themselves
- Coding qualitative data
 - Reduce data to a manageable form
 - Often done by writing notes on note cards and sorting into themes.
 - Predetermined categories vs. emerging categories

How to make coding manageable

- Read through all of the data.
 - Attach working labels to blocks of text
- Cut and paste blocks of text onto index cards.
- Group cards that have similar labels together
- Revisit piles of cards to see if clusters still hold together.

Other Strategies

- Concept Mapping
 - Analyzing Antecedents and Consequences
 - Displaying Findings
 - Stating what's missing



Data Interpretation

- Answer these four questions
 - What is important in the data?
 - Why is it important?
 - What can be learned from it?
 - So what?
- Remember
 - Interpretation depends on the perspective of the researcher.
 - Why?

Interpretation

- One technique for data interpretation
 - Extend the analysis by raising questions
 - Connect findings to personal experiences
 - Seek the advice of “critical” friends.
 - Contextualize findings in the research
 - Converging evidence?
 - Turn to theory

Ensuring Credibility

- Are the data based on one's own observation, or is it hearsay?
- Is there corroboration by other's of the observation?
- In what circumstances was an observation made or reported?
- How reliable are those providing the data?
- What motivations might have influenced a participant's report?
- What biases might have influenced how an observation was made or reported?

Mixed Methods?

A combination of quantitative and qualitative techniques.

BUT

- Under what circumstances might mixed methods work?
- Under what circumstances might mixed methods not work?

Quantitative vs. Qualitative

Quantitative Methodologies

Preference for precise hypotheses stated at the outset.
Preference for precise definitions stated at the outset.
Data reduced to numerical scores.
Much attention to assessing and improving reliability of scores obtained from instruments.
Assessment of validity through a variety of procedures with reliance on statistical indices.
Preference for random techniques for obtaining meaningful samples.
Preference for precisely describing procedures.
Preference for design or statistical control of extraneous variables.
Preference for specific design control for procedural bias.
Preference for statistical summary of results.
Preference for breaking down complex phenomena into specific parts for analysis.
Willingness to manipulate aspects, situations, or conditions in studying complex phenomena.

Qualitative Methodologies

Preference for hypotheses that emerge as study develops.
Preference for definitions in context or as study progresses.
Preference for narrative description.
Preference for assuming that reliability of inferences is adequate.
Assessment of validity through cross-checking sources of information (triangulation).
Preference for expert informant (purposive) samples.
Preference for narrative/literary descriptions of procedures.
Preference for logical analysis in controlling or accounting for extraneous variables.
Primary reliance on researcher to deal with procedural bias.
Preference for narrative summary of results.
Preference for holistic description of complex phenomena.
Unwillingness to tamper with naturally occurring phenomena.

Definition and Purpose

- Mixed methods research
 - A style of research that uses procedures for conducting research that are typically applied in both quantitative and qualitative studies
 - The purpose of these designs is to build upon the synergy and strength that exists between quantitative and qualitative methods in order to more fully understand a given phenomenon than is possible using either quantitative or qualitative methods alone

Definition and Purpose

- Mixed methods research
 - The research problem itself determines the choice of a design
 - Examples:
 - Using surveys to identify specific groups of students and conducting focus groups with them to understand their views
 - A series of interviews are conducted to ascertain the critical issues bothering students, and a survey of the student body is conducted using these issues as variables

Three Types of Designs

- Three characteristics that differentiate types of mixed methods designs
 - The **priority** given to either the quantitative or qualitative data collection
 - The **sequence** of collecting quantitative or qualitative data
 - The **data analysis techniques** used to either combine the analysis of data or keep the two types of data separate

Three Types of Designs

- Three common designs
 - QUAL-Quan Model
 - The exploratory mixed methods design
 - Qualitative data are collected **first** and are more heavily weighted
 - QUAN-Qual Model
 - The explanatory mixed methods design
 - Quantitative data are collected **first** and are more heavily weighted

Three Types of Designs

- Three common designs (continued)
 - QUAN-QUAL Model
 - The triangulation mixed methods design
 - Quantitative and qualitative data are collected concurrently and both are weighted equally
- Notation
 - Abbreviations *QUAN* and *QUAL* are obvious
 - Order and capitalization
 - The first to be read or the capitalized abbreviation is the dominant perspective and is weighted more heavily
 - If both are capitalized, it means both are weighted equally

Characteristics of Mixed Methods Designs

- The title of the research includes terms that suggest more than one method is being used
 - Mixed methods
 - Integrated
 - Triangular
 - Quantitative – Qualitative
- Both quantitative and qualitative methods are used in the study

Characteristics of Mixed Methods Designs

- The researcher describes the kinds of mixed methods being used
- The data collection section indicates narrative, numerical, or both types of data are being collected
- The purpose statement or the research questions indicate the types of methods being used
- Questions are stated and described for both quantitative and qualitative approaches

Characteristics of Mixed Methods Designs

- The researcher indicates the sequencing of collecting qualitative and/or quantitative data (i.e., QUAN-Qual, QUAL-Quan, or QUAN-QUAL)
- The researcher describes both quantitative and qualitative data analysis strategies
- The writing is balanced in terms of quantitative and qualitative approaches

Evaluating a Mixed Methods Design

- Eight questions
 - Does the study use at least one quantitative and one qualitative research strategy?
 - Does the study include a rationale for using a mixed methods design?
 - Does the study include a classification of the type of mixed methods design?
 - Does the study describe the priority given to quantitative and qualitative data collection and the sequence of their use?

Evaluating a Mixed Methods Design

- Eight questions (continued)
 - Was the study feasible given the amount of data to be collected and concomitant issues of resources, time, and expertise?
 - Does the study include both quantitative and qualitative research questions?
 - Does the study clearly identify qualitative and quantitative data collection techniques?
 - Does the study use appropriate data analysis techniques for the type of mixed methods design?