Wolters Kluwer
When you have to be right

Chapter 13
Mixed Methods and Other Special Types of Research

1

Mixed Method Research (triangulation)

- Research that integrates quantitative and qualitative data and strategies in a single study or coordinated clusters of studies
- Many areas of inquiry can be enriched by triangulating quantitative and qualitative data; some questions require mixed methods: **pragmatism**
- Advantages
  - Complementarity
  - Practicality
  - Enhanced validity

2

Purposes and Applications of Mixed Method Research

- Instrument development
- Intervention development
- Hypothesis generation and testing
- Theory building, testing, and refinement
- Explication

3

Mixed Method Designs and Strategies

- Concurrent versus sequential approaches
  - **Concurrent**—Qualitative and quantitative data are collected at the same time.
  - **Sequential**—Qualitative and quantitative data are collected in phases.
- Morse notations system:

  QUAL/quan, QUAN/qual, QUAL/QUAN

4

Specific Mixed Method Designs

- **Convergent parallel design:** obtain different, but complementary, data about the central phenomenon under study—i.e., to triangulate data sources
- **Explanatory design:** sequential designs with quantitative data collected in the first phase, followed by qualitative data collected in the second phase
- **Exploratory design:** sequential MM designs, with qualitative data being collected first

5

Other Special Types of Research

- Intervention research
  - Clinical trials; evaluation research; nursing intervention research
- Health services and outcomes research
- Survey research
- Quality improvement studies
- Secondary analysis
- Delphi surveys
- Methodologic research

6

Question

Which type of research involves an intervention?

a. Survey research
b. Clinical trials
c. Secondary analyses
d. Methodologic research

7

Answer

b. Clinical trials

Rationale: Studies that involve an intervention include clinical trials, evaluation research, and nursing intervention research. Outcomes research, surveys, secondary analyses, and methodologic research do not involve an intervention.

8

Clinical Trials

- Studies that develop clinical interventions and test their efficacy and effectiveness
- Undertaken to evaluate an innovative therapy or drug are often designed in a series of phases

9

Phases of a Full Clinical Trial

- **Phase I:** designed to establish safety, tolerance, and dose
- **Phase II:** seeks preliminary evidence of effectiveness—a pilot test often using a quasi-experimental design.
- **Phase III:** fully tests the efficacy of the treatment via a **randomized clinical trial** (RCT), often in multiple sites; sometimes called an **efficacy study**
- **Phase IV:** focuses on external validity of an intervention in the general population; emphasis on generalizability

10

Practical Clinical Trials

- Emphasis on EBP has led to a call for studies that bridge the gap between tightly controlled efficacy studies and subsequent effectiveness studies.
- **Practical clinical trials** (or **pragmatic clinical trials**) help in making decisions in real-world applications.
- Pragmatism is a paradigm often associated with MM research, which provides a basis for a position that has been stated as the "dictatorship of the research question."

11

Evaluation Research

- Examines how well a specific program, practice, procedure, or policy is working
  - Process analysis
    - Often undertaken to obtain descriptive information about the process by which a program gets implemented and how it actually functions
  - Economic analysis
    - Assess whether program benefits outweigh its monetary costs

12

Question

During which phase of a full clinical trial would an efficacy study be done?

a. Phase I

b. Phase II

c. Phase III

d. Phase IV

13

Answer

c. Phase III

Rationale: Phase III fully tests the efficacy of the treatment via a randomized clinical trial (RCT), often in multiple sites; this phase is sometimes called an efficacy study. Phase I finalizes the intervention; phase II seeks preliminary evidence of effectiveness, usually via a pilot test; and phase IV focuses on long-term consequences of the intervention and on generalizability (sometimes called an effectiveness study).

14

Nursing Intervention Research

- Describes an approach distinguished by a distinctive *process* of planning, developing, and testing interventions—especially *complex interventions*
- Several phases
  - Basic developmental research
  - Pilot research
  - Efficacy research
  - Effectiveness research

15

Health Services Research

- Designed to document the quality and effectiveness of health care and nursing services
- Often focuses on parts of a health care quality model developed by Donabedian; key concepts:
  - Structure of care (e.g., nursing skill mix)
  - Processes (e.g., clinical decision making)
  - Outcomes (end results of patient care)

16

Outcome Research

- Subset of health services research
- Comprises efforts to understand the end results of particular health care practices and to assess the effectiveness of health care services
- Represents a response to the increasing demand from policy makers and the public to justify care practices in terms of improved patient outcomes and costs

17

Survey Research

- Obtains quantitative information (via self-reports) on the prevalence, distribution, and interrelations of variables in a population
- Used primarily in correlational studies and to gather information from nonclinical populations
- Secures information about people's actions, intentions, knowledge, characteristics, opinions, and attitudes
- May be cross-sectional or longitudinal

18

Survey Research—(cont.)

- Modes of collecting survey data
  - Personal (face-to-face) interviews
  - Telephone interviews
  - Self-administered questionnaires
    - Distributed by mail or the Internet
- Personal interviews tend to yield the highest quality data but are very expensive.

19

Secondary Analysis

- Study that uses previously gathered data to address new questions
- Can be undertaken with qualitative or quantitative data
- Cost-effective; data collection is expensive and time-consuming.
- Secondary analyst may not be aware of data quality problems and typically faces “if only” issues (e.g., if only there was a measure of X in the data set).

20

Question

Tell whether the following statement is True or False.

Telephone interviews provide the best quality data for survey research.

a. True

b. False

21

Answer

b. False

Rationale: Personal interviews used with survey research tend to provide the highest quality data, but they are very expensive.

22

Delphi Surveys

- Developed as a tool for short-term forecasting
- The technique involves a panel of experts who are asked to complete several rounds of questionnaires focusing on their judgments about a topic of interest.
- Multiple iterations are used to achieve consensus.

Methodologic Research

- Studies that focus on development, validation, and evaluation of research tools and instruments
- Can involve qualitative or quantitative data
- Examples:
  - Developing and testing a new data collection instrument
  - Testing the effectiveness of stipends in facilitating recruitment