

Qualitative and Quantitative Methods of Research

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Qualitative versus Quantitative

Purpose

Quali: To understand & interpret social interactions.

Quanti: To test hypotheses, look at cause & effect, & make predictions.

Qualitative versus Quantitative

Group Studied

Quali: Smaller & not randomly selected.

Quanti: Larger & randomly selected.

Qualitative versus Quantitative

Variables

Quali: Study of the whole, not variables.

Quanti: Specific variables studied

Qualitative versus Quantitative

Type of Data Collected

Quali: Words, images, or objects.

Quanti: Numbers and statistics.

Qualitative versus Quantitative

Forms of Data Collected

Quali: Qualitative data such as open - ended responses, interviews, participant observations, field notes, & reflections.

Quanti: Quantitative data based on precise measurements using structured & validated data-collection instruments.

Qualitative versus Quantitative

Role of the Researcher

Quali: Researcher & their biases may be known to participants in the study, & participant characteristics may be known to the researcher.

Quanti: Researcher & their biases are not known to participants in the study, & participant characteristics are deliberately hidden from the researcher (double blind studies).

Qualitative versus Quantitative

Results

Quali: Particular or specialized findings that is less generalizable.

Quanti: Generalizable findings that can be applied to other populations.

Qualitative versus Quantitative

Scientific Method

Quali: Study of the whole, not variables.

Quanti: Specific variables studied

Qualitative versus Quantitative

Final Report

Quali: Narrative report with contextual description & direct quotations from research participants.

Quanti: Statistical report with correlations, comparisons of means, & statistical significance of findings.

Qualitative versus Quantitative

What is to be observed?

Quali: ✕ Qualities ✕ Behavior ✕ Complexities

Quanti: ✕ Quantities ✕ Scales ✕ Trends

Qualitative versus Quantitative

What are the type of questions asked?

Quali: ✕ Why? ✕ How?

Quanti: ✕ How many ✕ What

Qualitative versus Quantitative

How are the questions are put (methods)?

Quali: ✕ Document review ✕ Participant observations ✕ Interviews ✕ Focus group ✕ Workshops

Quanti: ✕ Application forms ✕ Questionnaires ✕ IQ Tests ✕ Measurements

Qualitative versus Quantitative

How the results are interpreted (analysis)?

Quali: ☒ Explore, explain, understand ☒ Narrative
☒ Particular ☒ Mainly inductive reasoning:
conclusions can be drawn from the evidence no
matter how incomplete

Quanti: ☒ Describe, measure, predict ☒ Statistical
tables and chart ☒ Universal ☒ Mainly deductive
reasoning: everything is known before
conclusions can be drawn

*Major Classes of Quantitative
and Qualitative Research*

Quantitative Research

Experimental Studies

- Researchers actively introduce an intervention or treatment
- Designed to test causal relationships
- Greater control over extraneous variables

Quantitative Research

Non-Experimental Studies

- Researchers collect data without making changes or introducing treatments
- Lesser control over extraneous variables

Examples:

- The effects of a submaximal exercise protocol, in comparison with a near-maximal voluntary contraction protocol, on continence control and muscle contraction strength among women with genuine stress urinary incontinence.

Examples:

- Factors that contributed to hospital readmission in a HongKong hospital. A readmitted group was compared with a non readmitted group of patients in terms of demographic characteristics and health conditions upon admission.

Qualitative Research

Rooted in research traditions that originate in the disciplines of anthropology, sociology, and psychology.

Qualitative Research

Grounded Theory Study

- Roots in sociology
- Seeks to describe and understand the key social psychological and structural processes that occur in a social setting
- Focus → developing social experience

Qualitative Research

- Component → discovery of a core variable that is central in explaining what is going on in that social scene
- Generate comprehensive explanations of phenomena that are grounded in reality

Example:

- A study to explain the material process of managing late stages of breastfeeding and weaning the child from the breast

Qualitative Research

Phenomenology

- Roots in both philosophy and psychology
- Concerned with the lived experiences of humans
- Approach to thinking about what life experiences of people are like and what they mean
- What is the essence of this phenomenon as experienced by these people?

Qualitative Research

Example:

- A study to illuminate the lived experiences of care providers who were highly skilled communicators in their relationships with patients with stroke and aphasia.

Qualitative Research

Ethnography

- Primary research tradition within anthropology
- Provides a framework for studying the meanings, patterns, and experiences of a defined cultural group in a holistic fashion
- Engaged in extensive fieldwork, often participating to the extent possible in the life of the culture under study

Qualitative Research

- Broadly defined culture → Haitian refugee communities
- Narrowly defined culture → The Culture of Emergency Departments
- Aim → to learn from (rather than to study) members of a cultural group, to understand their world view as they perceive and live it

Qualitative Research

Example:

- An analysis of a nursing home residence, focusing on the ethical issues of daily living affecting nursing home residents with dementia

Major Steps in Quantitative Research

- Researchers move from beginning point of a study (the posing of a question) to the end point (the obtaining of an answer) in a linear sequence of steps

Major Steps in Quantitative Research

Phase 1: The Conceptual Phase

- Activities include reading, conceptualizing, theorizing, reconceptualising and reviewing ideas with colleagues or advisers
- Skills include creativity, deductive reasoning, insight, and a firm grounding in previous research on the topic of interest

Major Steps in Quantitative Research

- Step 1. Formulating and Delimiting the Problem
- Step 2. Reviewing the Related Literature
- Step 3. Undertaking Clinical Fieldwork
- Step 4. Defining the Framework and Developing Conceptual Definitions
- Step 5. Formulating Hypothesis

Major Steps in Quantitative Research

Phase 2: The Design and Planning Phase

- The methods and procedures to be used to address the research question and plan for the actual collection of data

Major Steps in Quantitative Research

- Step 6. Selecting a Research Design
- Step 7. Developing Protocols for the Intervention
- Step 8. Identifying the Population to be Studied
- Step 9. Designing the Sampling Plan

Major Steps in Quantitative Research

- Step 10. Specifying methods to Measure the Research the Research Variables
- Step 11. Developing Methods for a Safeguarding Human/Animal Rights
- Step 12. Finalizing and Reviewing the Research Plan

Major Steps in Quantitative Research

Phase 3: The Empirical Phase

- Involves collecting research data and preparing those data for analysis

Major Steps in Quantitative Research

- Step 13. Collecting the Data
- Step 14. Preparing the Data for Analysis

Major Steps in Quantitative Research

Phase 4. The Analytic Phase

- Analysis and interpretation of data

Major Steps in Quantitative Research

- Step 15. Analyzing the Data
- Step 16. Interpreting the Results

Major Steps in Quantitative Research

Phase 5: The Dissemination Phase

Major Steps in Quantitative Research

- Step 17. Communicating the Findings
- Step 18. Utilizing the Findings in Practice

Activities in Qualitative Research

- Begin with a broad question regarding the phenomenon of interest, often focusing on a little studied aspect
- More flexible and less linear

Activities in Qualitative Research

Conceptualizing and Planning a Qualitative Study

- Identifying the Research Problem
- Doing Literature Reviews
- Selecting and Gaining Entree Into Research Sites
- Research Designs in Qualitative Studies

Activities in Qualitative Research

Conducting the Qualitative Study

- Once in the field, researchers select informants collect data, and then analyze and interpret them in an iterative fashion;
- Field experiences help in an ongoing fashion to shape the design of the study
- Early analysis leads to refinements in sampling and data collection, until saturation (redundancy of information) is achieved

Activities in Qualitative Research

Disseminating Qualitative Findings

- Used to shape the direction of further studies (including more highly controlled quantitative studies)
- Guide the development of structured measuring tools for clinical and research purposes
- Shape the researcher's perceptions of a problem or situation and their conceptualizations of potential solutions

E N D

Thanks!