

The Practice of Social Research

Sampling and Generalisability

Doctoral Training Centre

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Definition: Research Design

Process of choosing a way to answer your research question, which requires knowing both what your options are and how to evaluate their relative strengths and weaknesses.

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Qualitative Research Design

- Qualitative Research typically **starts** with observations – i.e. it is **INDUCTIVE**.
- These observations are then used to create theory or generate hypotheses.
- This process leads to research goals such as **discovery** and **exploration**.

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Lecture Overview

Lecture → Group Discussion → Comments

- Review: Research Design
- Sampling and generalisability

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Research Design: Getting Started

- Choosing an appropriate research design involves matching goals that motivate your research with methods for meeting those goals.

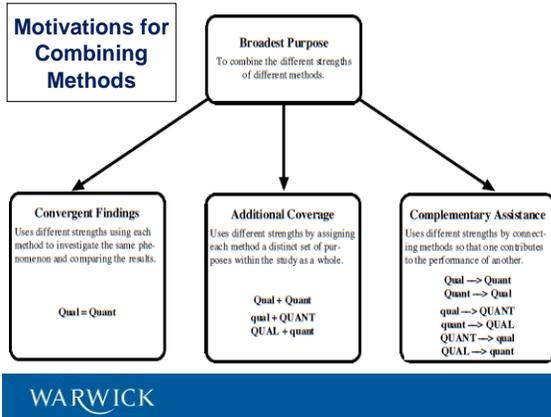
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From Theory to Hypotheses

- **Theory** involves wide-ranging statements about the world. These are located at a high level of abstraction and generalization.
- Quantitative analysis is usually involved in **empirically testing** particular hypotheses that are derived from theory.
- **Hypotheses** are general statements at a lower level of abstraction. They involve particular relationships (and directionality) between two (or more) concepts.
- Sometimes different theories will give rise to **competing hypotheses**. These can be empirically arbitrated.



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Likely Reviewer / Reader Queries

Purpose and Rationale for the Research

Type of Research

(e.g. case study or action research)

Time Horizon for the Research

(e.g. longitudinal versus cross-sectional)

Unit of Analysis, Population of Interest, Sampling

(provide details!)

Level and Form of Researcher Involvement during Data Collection Process

(e.g. required details include duration of in-depth qualitative interviews or specific procedure for collecting survey forms)

Context of Data Collection

(e.g. on a university campus versus where people normally congregate)

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Sampling and Generalisability:

Sampling from an Informative Few

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Quantitative Perspective

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Methods Section in Research Report

- Methods section provides foundation for statistical inference
 - Reader can judge epistemic strength of knowledge claims on basis of methods for obtaining this knowledge
- To provide this basis, you need to describe for the reader the approaches to sampling, variables, measurement tools, data analysis etc.

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Statistics in Theory

- Achieve description and 'reduction' (summarising) using standardised data sets and statistics.
- Statistical inference: based on testing hypotheses, models and predictions
- Inferential statistical analysis is mediated through probability theory

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Robustness of knowledge: confidence intervals

p-value

'Confidence intervals' used to indicate the level of alpha or Type 1 error (risk of false positives) when taking a model or finding built from samples and generalising to the population that is the focus of research interest. Generalisation within explicitly identified confidence intervals is informed by *probability theory*.

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Sampling

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Definition: 'Sampling'

Using data collection from a smaller number of individuals to represent the larger group from which you selected them.

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Definition: 'Sample'

The individuals from whom data is collected in order to represent the larger group from which they were selected

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Definition: 'Population'

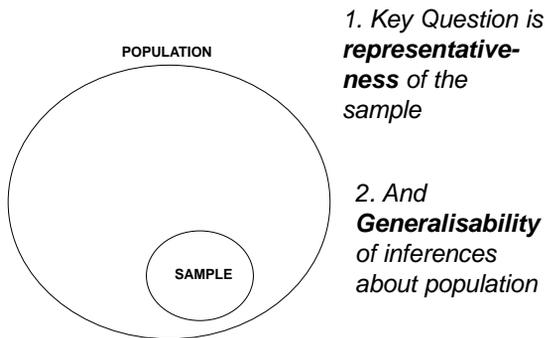
The larger group about which the researcher is seeking to generalise based on the smaller sample she or he has collected.

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Goal of Sampling

- To be able to make valid inferences about the population on the basis of data collected from a smaller group

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The Sampling Process

1. Specify population (N)
2. Decide sample size (n)
3. Limit sampling error and bias
4. Sample Selection

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Sample size

- Sample size can affect the available statistical analysis options.
- Greater sample sizes are more able to identify real differences (i.e. more sensitive).
- Greater risk of sampling error with smaller sample size.

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Probability sampling methods

1. Simple random sampling
2. Randomised Stratified sampling
3. Randomised Cluster sampling
4. Systematic sampling

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Non-Probability Sampling

1. Convenience sampling
2. Purposive sampling
3. Quota sampling

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Qualitative Perspectives

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General Characteristics

- Qualitative samples tend to be:
 - Exploratory (less known about population)
 - Smaller (more intensive data collection)
 - Purposive (non-random, but not haphazard)

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Qualitative Sampling Goals

- Qualitative sampling aimed at representing the research **phenomenon** rather than the **distribution** of particular characteristics across the **population**.
- Qualitative sampling principles such as purposive / theoretical sampling and saturation are seeking to trace boundaries of phenomenon and range of responses.

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General Point and Discussion

- Important you are not trying to make a claim to generalisability that is unwarranted by the method of data collection and the sampling being employed.
- *Discuss (1) the kinds of claims you would like to be able to make at the end of your study, (2) then consider the efficacy of your proposed methods for getting u there.*
- *Are there any discrepancies?*

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