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Applied Quantitative Methods

Rural Sociology
with Gender
Studies

Research Designs



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Research Design

What is a research design?

- ⌘ a structure or framework to guide data collection and analysis
- ⌘ e.g. search for causality, understanding, or generalization
- ⌘ research strategy --> research design --> research method



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Criteria to evaluate social research

- ⌘ Reliability: Are measurements consistent?
- ⌘ Replication: Is procedure explained clearly enough for study to be repeated?
- ⌘ Validity: How accurate are findings?
 - ☒ Construct validity: Do measures really represent the underlying concepts?
 - ☒ Internal validity: Did IV *cause* DV?
 - ☒ External validity: Can results be generalized?
 - ☒ Ecological validity: Are findings meaningful to participants' everyday lives?



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Research question

- ⌘ must be clearly formulated and specific
- ⌘ guide every stage of research process
- ⌘ progressive focusing down:
 - ☒ general research area --> research questions
(chosen on basis of personal interest,
theory, literature, new social problem)
- ⌘ more open and speculative than hypotheses



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Research designs

⌘ Five main research designs:

- ☒ experimental
- ☒ cross-sectional / survey
- ☒ longitudinal
- ☒ case study
- ☒ comparative



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Experimental design

- ⌘ to establish causal relationship between independent and dependent variables
- ⌘ IV manipulated; all other variables held constant
- ⌘ random assignment of subjects to experimental and control groups
- ⌘ rarely used in social research - either impractical or unethical



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Alternatives to the Laboratory Experiment

⌘ Field experiment

- ☒ in 'real life' settings
- ☒ e.g. Rosenthal & Jacobson (1968) - classroom

⌘ Quasi-experiments

- ☒ some but not all characteristics of laboratory experiments

⌘ Natural experiments

- ☒ study of social change that would have happened anyway
- ☒ e.g. evaluation of new social policies



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Cross-sectional design

- ⌘ collection of data from more than one case at a single point in time
- ⌘ shows variation between individuals, families, groups or nations
- ⌘ quantifiable data - patterns of association between variables
- ⌘ includes surveys - e.g. Health and Lifestyle survey
- ⌘ non-manipulable variables (ethics of social engineering)



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Longitudinal design

- ⌘ survey of the same sample on more than one occasion
- ⌘ shows areas of social change over time
- ⌘ *panel study* - e.g. BHPS - random selection
- ⌘ *cohort study* - shared characteristic, e.g. date of birth
- ⌘ can infer causal effects from T1-->T2
- ⌘ problems of attrition and panel conditioning



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Case study design

- ⌘ detailed and intensive analysis of one case
- ⌘ e.g. a specific person, event, organization or community
- ⌘ often involves qualitative research
- ⌘ case is the focus of interest in its own right - location/setting just provides a background
- ⌘ types of case: critical, unique, extreme, revelatory, exemplifying
- ⌘ e.g. Holdaway (1982, 1983): ethnography of occupational culture in a particular police force



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Comparative design

- ⌘ using the same methods to compare two or more meaningfully contrasting cases
- ⌘ can be qualitative or quantitative
- ⌘ often cross-cultural comparisons
 - ☒ Crompton & Birkelund (2000): bank managers in Norway and UK
- ⌘ includes multiple case studies
- ⌘ problem of translating research instruments and finding comparable samples



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Combining research strategy and research design

- ⌘ each research design can be implemented as either a quantitative or a qualitative study
- ⌘ e.g. case study:
 - ☒ quantitative: Goldthorpe et al (1968): patterns of embourgeoisement in Luton car workers
 - ☒ qualitative: Shaw (1930): 'Stanley', a delinquent boy
- ⌘ exception: experimental design rarely uses qualitative research strategy