Introduction to Survey Research

Lecture 1
Survey Research & Design in Psychology
James Neill, 2018
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Overview
1. Readings
2. Scientific paradigm
3. Types of research
4. What is a survey?
5. History of survey research
6. Survey research examples
7. Survey research characteristics
8. Purposes of survey research
9. Pros and cons
10. Summary

Readings
Recommended readings for Module 1 (Lectures 1 and 2)

2. Fowler (2002). Designing questions to be good measures. [Ereserve].
3. Ch 29: Statistics and the analysis of experiments
4. Ch 34: The analysis of a questionnaire/survey project

Creative Research Systems (2008) The steps in a survey project (Online article)
1. Establish the goals of the project - What you want to learn
2. Determine your sample - Whom you will interview
3. Choose interviewing methodology - How you will interview
4. Create your questionnaire - What you will ask
5. Pre-test the questionnaire, if practical - Test the questions
6. Conduct interviews and enter data - Ask the questions
7. Analyze the data - Produce the reports

http://www.surveysystem.com/sdesign...

Fowler (2002) Designing questions to be good measures (Book chapter)

Designing Questions to Be Good Measures

In surveys, answers are of interest not intrinsically but because of their relationship to something they are supposed to measure. Good questions are reliable (providing consistent measures in comparable situations) and valid (answers correspond to what they are intended to measure). This chapter discusses theory and practical approaches to designing questions to be reliable and valid measures.
Howitt & Cramer (2014)
Introduction to Statistics in Psychology
(Book chapters)
Ch 29 Statistics and the analysis of experiments
Ch 34 The analysis of a questionnaire/survey project

Nardi (2006)
Developing a questionnaire
(Book chapter)

Scientific Paradigm

Positivism
- A philosophy of science that confines itself to the data of experience (empirical evidence)
- Excludes a priori or metaphysical speculations
- Emphasises the achievements of science
- Recurrent theme in the history of Western thought
- Sources:
  Encyclopedia Britannica, Wikipedia

Not everything that counts can be counted, and not everything that can be counted counts.
- William Bruce Cameron

Image source: https://commons.wikimedia.org/wiki/File:Albert_Einstein_portrait.jpg
Empirical approach to psychosocial research

- assume that:
  1. the world is made up of phenomena which have properties that are measurable
  2. psychological phenomena can be measured, recorded, and analysed
  3. interpretation of analysis can lead to valid insights about how people think, feel, and behave

Scientific method

- Observe phenomenon
- Ask questions e.g., why
- Make hypothesis
- Conduct experiment
- Collect data
- Analyse data
- Interpret and conclude
- Apply findings

“Hourglass” notion of research

- begin with broad questions
- narrow down, focus in
- operationalize
- observe
- analyze data
- reach conclusions
- generalize back to questions

Types of research

Three main research methods:
1. Experimental
2. Quasi-experimental
3. Non-experimental

- Note: Surveys are widely used in non-experimental research, but also in quasi-experimental and experimental research.

Types of research - Experimental

- Characterised by:
  - Random assignment to groups
  - Control over extraneous variables
- Pros:
  - Powerful method
- Cons
  - Can be difficult to conduct
  - May not be ecologically valid
Characterised by:
• Use of “naturally occurring” groups
  – e.g., diseased vs. healthy
• Assignment to groups is non-random
• Some control over extraneous variables
  – e.g., match participants for age and lifestyle
Pros:
• Balances rigour of experimental and lack of control of non-experimental

Pros:
• No “groups” or “conditions” are used
  – e.g., students at a specific university
Cons:
• Ecological validity

What type of research is the following?
A researcher surveys Australian community attitudes to eating non-traditional meats (e.g. venison, kangaroo).
• Experimental
• Quasi-experimental
• Non-experimental

What type of research is the following?
A researcher compares study habits of university students who regularly use caffeine with uni students who do not regularly use caffeine.
• Experimental
• Quasi-experimental
• Non-experimental

What is a Survey?
What is a survey?
• A standardised stimulus
• A measuring instrument
• A way of converting fuzzy psychological stuff into hard data for analysis

History of Survey Research

Modern survey research methodology was initially developed during the 1920s. Since the 1980s, theories and principles evolved to create a unified perspective on the design, conduct, and evaluation of surveys (survey science).

Survey Research Examples

Some fields which use survey research

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<thead>
<tr>
<th>Field</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>Census</td>
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<td>Epidemiology</td>
<td>Health surveys</td>
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<td>Marketing</td>
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<td>Sociology</td>
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Psychological topics investigated by survey research

- Attitudes and opinions: e.g., older people’s feelings about extending retirement age
- Behaviours: e.g., extent to which households recycle
- Motivations: e.g., reasons for attending university
- Emotions: e.g., levels of stress and anxiety
- Satisfaction: e.g., custom experiences

Example survey research studies

- Environmental attitudes across cultures
- Effect of working hours on family life, depression & stress related health problems
- Optimism & pessimism as predictors of change in health after major life events

Example survey research studies

- The effect of age on positive and negative affect
- Are males satisfied with their body?
- Ethnicity, social deprivation and psychological distress in adolescents
- Perceptions and attitudes towards people with mental health problems
- Attitudes toward farm animal welfare

Survey research characteristics

- Usage: Surveys are widely used in the social sciences.
- Systematic: Follow specific procedures based on survey science and the scientific method.
- Replicable: Other people using the same methods are likely to get essentially the same results

Survey research characteristics

- Types: Administered via interviews or questionnaires.
- Data: Often quantitative, but can be qualitative.
- Impartial sampling: Selected from target population without preference, to be representative.
- Ecological validity: Can obtain in situ, real-world samples.
Purposes of survey research

Two broad purposes of survey-based research:

- Information Gathering
- Theory Testing & Building

Purposes of survey research - Information gathering

The goal is to gather information e.g.,
- polls
- census
- customer satisfaction
- attitudes

Purposes of survey research - Theory testing & building

The goal is to test and build theory e.g.,
- Personality theories
- Social psychology theories

Often surveys do some info gathering and some theory testing.

Purposes of survey research

Further consider four purposes of survey research:

- Information Gathering
- Theory Testing & Building
- Exploratory
- Descriptive
- Explanatory
- Predictive

Purposes of survey research - Exploratory

The goal is to discover and explore psychological phenomena e.g.,
“What psychological issues are experienced by survivors of natural disasters?”
**Purposes of survey research - Descriptive**

The goal is to describe phenomena e.g.,
- Consumer profiles (age, gender)
- Working conditions (hours, pay)

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**Purposes of survey research - Explanatory**

The goal is to explain phenomena by looking at the relations between, and patterns amongst, variables e.g.,
- Are extroverts happier than introverts?
  **Why?** (or why not?)

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**Practice quiz question 5**

What is the goal of this study?
A researcher measures Australian people’s attitudes towards asylum seekers to Australia.
- Exploratory
- Descriptive
- Explanatory
- Predictive

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**Practice quiz question 6**

What is the goal of this study?
A researcher administers a happiness survey and a personality survey in order to examine the hypothesis that extraverts are happier.
- Exploratory
- Descriptive
- Explanatory
- Predictive
Practice quiz question 7
What is the goal of this study?
Post-deployment interviews with defence personnel are used to identify risk factors for PTSD. These risk factors are then monitored in currently deployed personnel.
• Exploratory
• Descriptive
• Explanatory
• Predictive

Pros and Cons of Survey Research

Advantages of survey-based research
• Ecological validity
• Access to wide range of participants
• Potentially large amounts of data
• May be more ethical (than experiments)

Disadvantages of survey-based research
• Lack of control → less internal validity
• Data may be “superficial”
• Can be costly to obtain representative data
• Self-report data only
• Potentially low compliance rates

Summary

Summary 1
• Types of research:
  • Experimental
  • Quasi-experimental
  • Non-experimental
• Surveys are used in all types, especially non-experimental.
Summary 2

● What is a survey?
  ● A standardised stimulus designed to convert fuzzy psychological phenomenon into hard data.
● History
  ● Survey research has developed into a popular research method since the 1920's.

Summary 3

● Purposes/goals of research:
  ● Information gathering
  ● Exploratory
  ● Descriptive
  ● Theory testing/building
  ● Explanatory
  ● Predictive

Summary 4

Survey research
Pros include:
  ● Ecological validity
  ● Cost efficiency
  ● Can obtain lots of data
Cons include:
  ● Low compliance
  ● Reliance on self-report

References
4. Chapter 29 - Statistics and the analysis of experiments (pp. 401-408)
5. Chapter 34 - The analysis of a questionnaire / survey project (pp. 476-484)

Next lecture

Survey design
  ● Survey administration methods
  ● Survey construction
  ● Levels of measurement
  ● Biases
  ● Sampling