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)
Readings
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

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


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)

LEARNING GOALS
In this chapter you will read about the strengths and weaknesses of different types of survey methods. You will also learn how to design a questionnaire; how to write attitude, behavior, and demographic questions and format a survey. Coding responses and preparing data for computer analysis are important skills discussed as well. By the end of the chapter, you should be able to critique poorly written surveys.

Trochim (2006)
Survey research
(Online article)

http://www.socialresearchmethods.net/kb/survey.php
Scientific Paradigm

• 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 Brittanica, Wikipedia

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 Brittanica, Wikipedia

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

The "hourglass" notion of research
begin with broad questions
e.g., design a survey
e.g., collect data
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
Types of research - Quasi-experimental

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

Types of research - Quasi-experimental

Characterised by:
- No "groups" or "conditions" are used
  - e.g., students at a specific university
Pros
- Ecological validity
Cons
- Minimal control over extraneous variables

Practice quiz question 1

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
Practice quiz question 2
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

Practice quiz question 3
What type of research is the following?
A researcher randomly allocates participants to a morning or evening exercise routine and then compares the sleep patterns of the two groups.
• 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

Civil servant at trailer park, collecting census data, Netherlands, 1925
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

<table>
<thead>
<tr>
<th>Field</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>Census</td>
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<tr>
<td>Epidemiology</td>
<td>Health surveys</td>
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<td>Marketing</td>
<td>Customer satisfaction</td>
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<td>Politics</td>
<td>Polls</td>
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<tr>
<td>Psychology</td>
<td>Attitudes, Emotions</td>
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<tr>
<td>Sociology</td>
<td>Social trends</td>
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</tbody>
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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

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
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.

Further consider four purposes of survey research:

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

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)

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?)

Purposes of survey research - Predictive

The goal is to be able to make accurate/useful predictions – i.e., what will happen?, e.g.,
• Does a couple’s length of time together prior to having children predict relationship satisfaction after having children?
Practice quiz question 4

What is the goal of this study?
A researcher lives in a religious commune in order to learn about the social psychological characteristics of cults.
• Exploratory
• Descriptive
• Explanatory
• Predictive

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

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
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**

3. Howitt & Cramer (2014): Chapter 29 - Statistics and the analysis of experiments (pp. 401-408)
4. Chapter 34 - The analysis of a questionnaire / survey project (pp. 476-484)

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**Next lecture**

**Survey design**

- Survey administration methods
- Survey construction
- Levels of measurement
- Biases
- Sampling