

# Research Methods

by Sophia Tutorial



## WHAT'S COVERED

This tutorial will cover the topic of research methodologies in sociology, through the definition and discussion of:

1. The Scientific Method
2. Research Methodology
  - a. Experiments
  - b. Survey Research
  - c. Secondary Sources
  - d. Participant Observation

## 1. THE SCIENTIFIC METHOD

The **scientific method** is a procedure that involves systematically formulating questions, gathering data, and questioning hypotheses. There are eight steps of the scientific method.



## STEP BY STEP

*Step 1: Define the problem.*

Ask broad, topical, problem defining questions, such as:

- What exactly am I going to look at?
- What am I going to study?
- How am I going to go about it?

*Step 2: Review the work of others.*

- What have other people done? What have they found on the topic?
- Are there flaws in their work? Did they leave something out?
- Do we believe them or do we need to retest? Have they covered the ground thoroughly?

Social scientists like to say, “Don’t go out and reinvent the wheel.” In other words, don’t replicate work that has already been done; make sure what you’re doing is unique.

### *Step 3: Hypothesize.*

Make an educated guess about what you're going to find when you do your research.

### *Step 4: Design a research plan.*

Determine exactly how you're going to test your hypothesis, how you're going to find the answers to your questions. There are many ways research can be organized in sociology, which we will explore in-depth later in the lesson.

### *Step 5: Collect your data.*

This is often the most labor-intensive stage. You're actually going out and gathering the raw data according to the research plan that you have in place.

### *Step 6: Interpret your data.*

The goal is to use the data you collected to shed some light on the hypothesis that you posed in step three.

### *Step 7: Explain the findings of your research.*

Your results and findings are documented formally, and they're often published in a journal or in book form so that others can read them and review your work.

### *Step 8: Pose new questions.*

In this last step of the scientific method, you want to pose new questions that come to light based upon your work, so that the process can continue. You may want to point out things that you overlooked or propose new directions for future research. Science is a process of gradual refinement and it's beneficial to point out areas you may have left unstudied.



#### TERM TO KNOW

### **The Scientific Method**

A procedure that involves systematically formulating questions, gathering data, and testing hypotheses.

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## 2. RESEARCH METHODOLOGY

Return to step four of the scientific method: design a research plan. You design a research plan according to a **research methodology**, which is a systematic and coherent plan for conducting research.

There are four main research methodologies in sociology:

- Experiments
- Survey research

- Secondary sources
- Participant observation



## TERM TO KNOW

### Research Method

A coherent and organized plan for conducting research.

### 2a. Experiments

An **experiment** is a regimented, highly controlled research method for investigating cause and effect relationships between variables, i.e., independent variables, dependent variables and a control group.

Experiments are rare in sociology because you cannot control all the various influences of social life. It's not possible to create an experimental situation in day-to-day social life, so often sociologists will use what are called 'natural experiments,' or experiments that simply occur in the process of conducting field work.

Sociologists are interested in the relationship of cause and effect, clearly, but it's rarely revealed in a regimented controlled fashion. Instead, the relationship is revealed more through conversation, in the process of doing qualitative research.



## TERM TO KNOW

### Experiment

A regimented and highly controlled method for investigating cause and effect relationships among variables.

### 2b. Survey Research

**Survey research** is a research method in which subjects respond to the researchers' questions directly, either in an interview or on a questionnaire. There are various types of interviewing:

- In-depth interviewing, which is more unstructured and lasts for a longer time, taking a more conversational tone
- Written questionnaires that respondents can fill out and respond to
- **Focus groups**, which are groups of individuals brought together in one room to engage in a guided discussion of a topic of interest to the research



**EXAMPLE** A sociologist doing research on the trends of couch-surfing and people using Air Bed and Breakfast (Airbnb) conducts preliminary one-on-one interviews and generates some insights to test his hypotheses. He then calls a focus group together, one with the couch-surfers and one with the people from Airbnb, to validate their responses in the interviews, bounce his ideas off of them and discuss his hypothesis to ensure that he is on track. Focus groups are very helpful in this regard.



## TERMS TO KNOW

### Survey Research

A research method where subjects respond to the researcher's questions directly in an interview or questionnaire.

## Focus Group

A group of individuals brought together in one room for a guided discussion of some topic of interest to research.

## 2c. Secondary Sources

**Secondary sources** are the use of data that has already been collected by other researchers.

### IN CONTEXT

The U.S. Census Bureau and the statistical abstracts of the United States are both secondary sources commonly used by sociologists. When you're doing library research (step two of the scientific method: reviewing the work of others), you're relying on secondary sources. You're seeing what other people have already done, in order to build your bibliography and demonstrate that you know what you're talking about when you position your research.

The use of secondary sources is also the primary methodology when you're doing historical sociology, which is a look at past societies and past structures to elucidate contemporary issues. Historical sociologists will often make use of library archives and secondary sources. The idea is to extract information from 'A', collect research from 'B', gather some insights from 'C,' then combine them to generate unique and new interpretations of social life and social phenomena that occurred in the past. In this way, secondary sources are a vital part of sociological research.



### TERM TO KNOW

## Secondary Sources

A research method that makes use of the work of other researchers.

## 2d. Participant Observation

**Participant observation** is a research method where people are observed in context going about their daily routines. Using this method, the researcher aims not to influence the actions of the people he is observing, but only to be present and observe. This method is advantageous because you get to see how people actually act rather than having them tell you how they act.



### THINK ABOUT IT

If you asked another person, "Are you a racist?", do you think he would admit to being a racist? Probably not. However, if you actually observed this person's behavior, in his natural setting once he is comfortable with you, he might do some observable things that divulge he is a racist. This is how the participant observation method is advantageous--because people can't hide their actions as easily as they can deceive you with their words.



### TERM TO KNOW

## Participant Observation

A research method where people are observed in-context going about their daily routines.



## BIG IDEA

All research methods have advantages and drawbacks. Sociologists ideally let their research questions dictate the methods they're going to use. Some questions are best answered with participant observations; some are better answered using surveys. Letting the questions dictate the methods helps the researcher to stay objective, and in fact, sociologists frequently use multiple methods at the same time.



## SUMMARY

Today you learned about **the scientific method**, as well as four prominent ways that sociologists design their research or **research methodologies**: experiments, survey research, secondary sources and participant observation.

Source: This work is adapted from Sophia author Zach Lamb.



## TERMS TO KNOW

### Experiment

A regimented and highly controlled method for investigating cause and effect relationships among variables.

### Focus Group

A group of individuals brought together in one room for a guided discussion of some topic of interest to research.

### Participant-Observation

A research method where people are observed in-context going about their daily routines.

### Research Method

A coherent and organized plan for conducting research.

### Secondary Sources

A research method that makes use of the work of other researchers.

### Survey Research

A research method where subjects respond to the researcher's questions directly in an interview or questionnaire.

### The Scientific Method

A procedure that involves systematically formulating questions, gathering data, and testing hypotheses.