

Descriptive Methods Describe What is Happening

Whether you are a psychologist, in business or medical field, you will probably needs to evaluate a claim or describe what is happening.

In step 3 of the Scientific Method, you use a research method to collect empirical evidence to assess a claim.

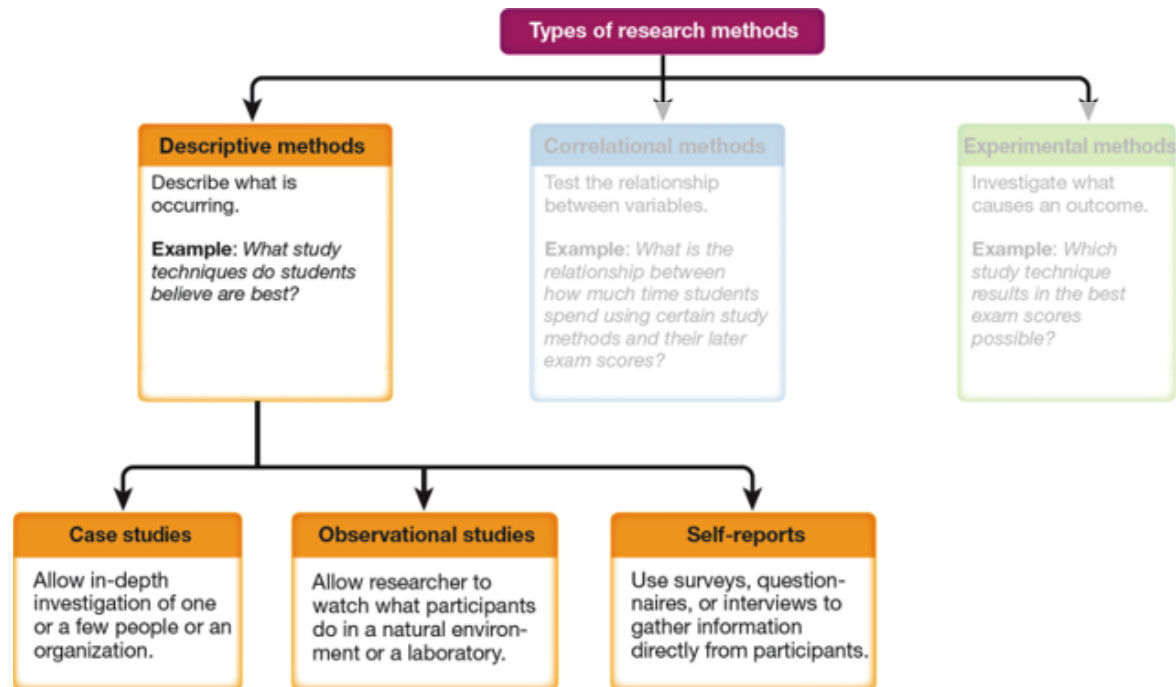


FIGURE 1.18

Case studies are a descriptive research method that involves intensive examination of one person or organization or a few individuals or organizations.

Advantages Can provide a lot of data.

Disadvantages Can be very subjective. If a researcher has a preexisting theory, then this theory can bias what is observed, investigated, and recorded. The results from a single case study cannot be extended to other people or organizations.

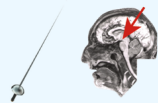


FIGURE 1.20

Observational studies are a descriptive method. They involve observing and classifying behavior, either with intervention by the observer or without intervention by the observer.

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FIGURE 1.21

Self-reports are a descriptive method that involves asking questions of research participants. The participants then respond in any way they feel is appropriate or select from among a fixed number of options.

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Disadvantages People can introduce biases into their answers (self-report bias). They may not recall information accurately.

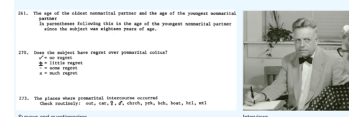


FIGURE 1.22 Self-Reports

Descriptive Methods: Case Studies

A case study is a highly detailed description of an individual or small group of individuals or event.

Case studies may be performed on a group of people who undergo extraordinary circumstances (such as victims of a bank hostage situation). Usually case studies are performed with extraordinary cases that cannot be studied by any ethical means (e.g. what are the effects of nuclear radiation on an unborn fetus, the effects of torture on obtaining information, or what are the effects when part of the frontal lobes are damaged).

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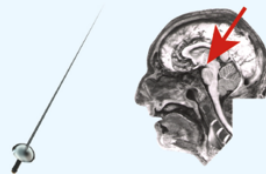
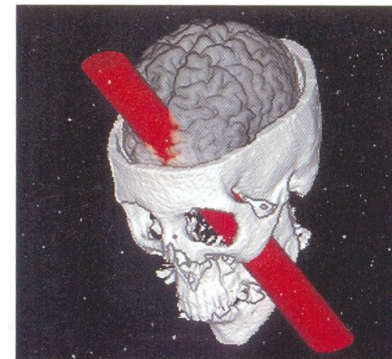


FIGURE 1.20

©iStockphoto.com/Photo: Spinnaker et al. (1999) Description of Brain Injury in the Amnesic Patient H.M. Based on Magnetic Resonance Imaging. *Experimental Neurology* 105, 23–26. With permission from Elsevier. Copyright © 2022 W.W. Norton & Co., Inc.



A Model of Gage's Injury Computer-simulated reconstruction of Gage's skull by Damasio and her colleagues (1994) suggests that Gage's left and right frontal lobes were both damaged.

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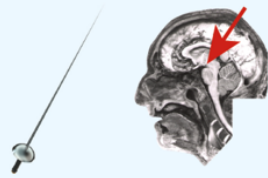
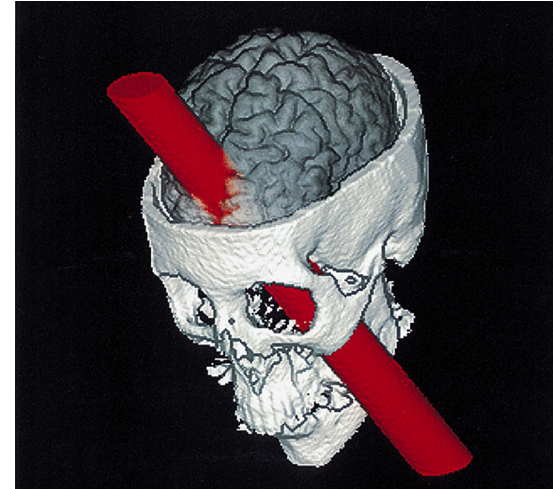


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Clinical Mach/Alamy Stock Photo; Squire et al. (1988) Description of Brain Injury in the Amnesic Patient H.S. Based on Magnetic Resonance Imaging. *Experimental Neurology* 105, 23–26. With permission from Elsevier. Copyright © 2022 W.W. Norton & Co., Inc.



Examples of Case Studies

- Researchers prepare an intensive report of the childhood who became a murderer.
- The police have discovered a 6-year-old who has been kept in a room by herself since birth and not exposed to spoken language. Does the lack of early exposure to language result in an inability to learn language?
- Phineas Gage had a 3½-foot iron rod go through his skull. What were the effects on his behavior?

- H.M. had part of his hippocampus damaged. As a result, he could not form new explicit memories (such as meeting you), but he could form new procedural memories (such as how to type).
- How do people behave when trapped underground (like the miners in Chile) for months? How do leaders arise in these cases?
- “Super-Size Me”
- What are US Presidents like? Biden is the 46th President, though there have only been 45 people serving as President. You might collect data on their college experiences, parental influence, jobs they had.

Advantages of case studies:

- Detailed information is gathered; individuals can be studied for a long period of time.
- Sources of information are from rare or unusual conditions or events such as serial killers, neglected children, or people with brain damage.
- Case studies can provide the basis for hypotheses to be tested later.

Disadvantages of case studies:

- Objectivity of the research may be compromised.
- The case being studied may not be representative of the condition or event.
- Generalizing the results is uncertain. Especially with a small non-representative sample.

Descriptive Methods: Observational Studies

The systematic observation and recording of behavior as it occurs in a natural setting.

Observational studies are a descriptive method. They involve observing and classifying behavior, either with intervention by the observer or without intervention by the observer.

Advantages Especially valuable in the early stages of research, when trying to determine whether a phenomenon exists. Can take place with intervention or without intervention.

Disadvantages Errors in observation can occur because of an observer's expectations (*observer bias*). An observer's presence can change the behavior being witnessed (*reactivity*).



With intervention



Without intervention

FIGURE 1.21

Observational Studies

Examples of Observational Studies:

- Do people who know someone else is waiting for “their parking spot” take more time to leave than when no one else is waiting for their parking spot?
- How do people in elevators behave?
- How do teenagers behave at the mall, park, bike path?
- In fifth-grade classrooms, are boys or girls more likely to say answers aloud without raising their hands?
- To learn what changes take place through childhood, Jean Piaget observed the differences in his children's thinking ([Chapter 4: Lifespan Development](#))
- How do people behave in hurricanes?
- How do people drive on icy roads?

Advantages of observational studies:

- Behavior is observed in the setting where it normally occurs, compared to the experimental designs that occur in an artificial and controlled setting.
- It can provide the basis for hypotheses to be tested later.

Disadvantages of observational studies:

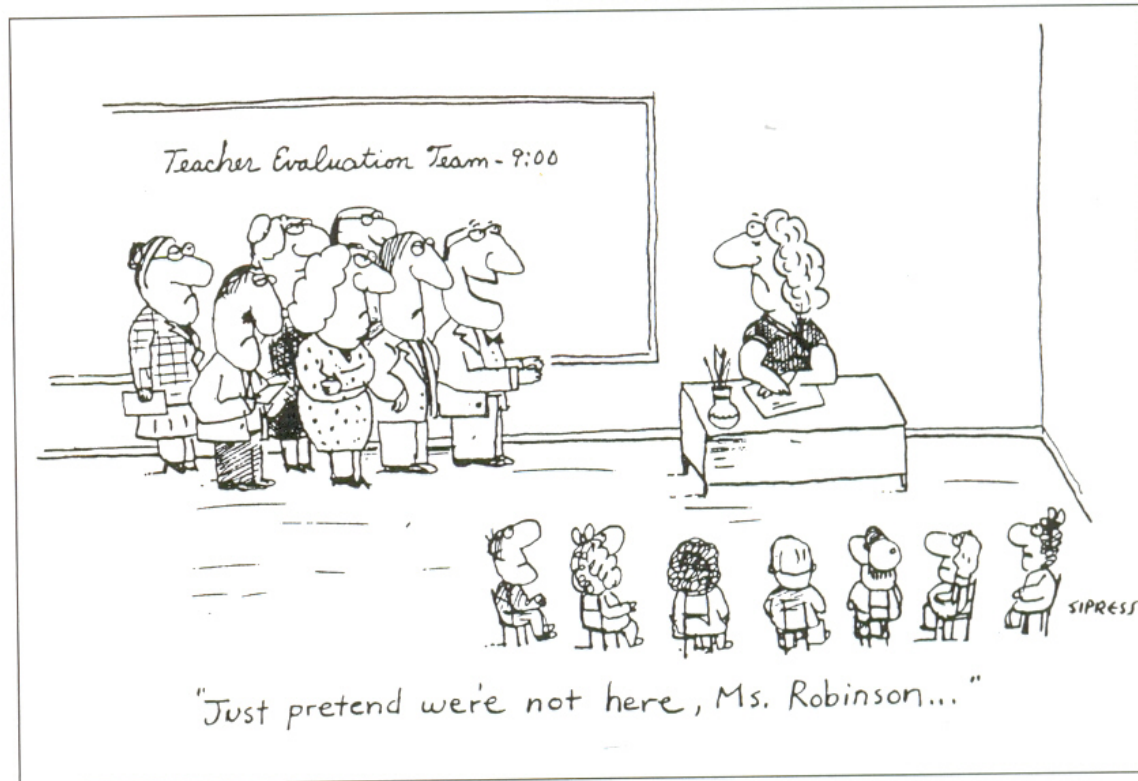
- Cannot be used to establish cause-and-effect relationships
- Often costly and difficult to perform.
- Researcher's expectations and beliefs can distort observations. The researcher needs to carefully separate their data from their interpretations of the data.
- There is little or no control over the conditions of observation.
- The presence of the researcher may influence the behavior of the subjects being studied (see Reactivity and the Hawthorn Effect).

Reactivity and Observing Behavior



"Don't shush me—and I don't care if she IS writing in her little notebook; just tell me where you were last night!"

Reactivity and Observing Behavior



Drawing by David Sipress/The Cartoon Bank, Inc.

Reactivity and Observing Behavior

A person who is nice to you, but rude to the waiter,
is not a nice person.

– Dave Barry



More funny pictures at Dudelol.com

When you are out on a date, you know you should be nice to the other person. That is expected. We act consistent with that expectation.

However, are we expected to treat a waiter (or waitress) nice?

Reactivity and the Hawthorne Effect

Reactivity: When observing people and you are visibly observing people, the person being observed might alter their behavior.


THE METHODS OF PSYCHOLOGY

The Hawthorne Effect

Hypothesis Being observed can lead participants to change their behavior.

Research Method The Hawthorne Effect

- 1 During studies of the effects of workplace conditions at the Hawthorne Works, a Western Electric manufacturing plant in Cicero, Illinois, between 1924 and 1933, the researchers changed the levels of lighting, pay incentives, and break schedules.
- 2 The researchers then measured the speed at which workers did their jobs.



Results The workers' productivity increased when they were being observed, regardless of what was changed: light, pay incentives, or break schedule.

Conclusion Being observed can lead participants to change their behavior, perhaps because they want to make a good impression or be good participants for the study.

Question Which research method described in Figure 1.18 was used in this study?

ANSWER: The research method used in this study is a descriptive method. Specifically, an observational study was used. The researchers changed various environmental factors at work, such as pay incentives. Then they watched workers to see the effects of these changes on the speed of their work.

Source: Roethlisberger, F. J., & Dickson, W. J. (1938). *Management and the worker: An account of a research program conducted by the Western Electric Company, Hawthorne Works, Chicago*. Harvard University Press.

Descriptive Methods: Self-Reports and Surveys

A research method where the researcher wants to get information directly from the participants ([page 31](#)).

Self-reports are a descriptive method that involves asking questions of research participants. The participants then respond in any way they feel is appropriate or select from among a fixed number of options.

Advantages They are an easy-to-administer, cost-efficient, and relatively fast way to collect data.

Disadvantages People can introduce biases into their answers (*self-report bias*). They may not recall information accurately.

261. The age of the oldest nonmarital partner and the age of the youngest nonmarital partner

In parentheses following this is the age of the youngest nonmarital partner since the subject was eighteen years of age.

270. Does the subject have regret over premarital coitus?

✓ = no regret

± = little regret

- = some regret

x = much regret

273. The places where premarital intercourse occurred

Check routinely: out, car, ♀, ♂, chrch, prk, bch, boat, ht1, mt1



Surveys and questionnaires

Interviews

FIGURE 1.22 Self-Reports

Self-Reports and Surveys



“Would you say Attila is doing an excellent job, a good job, a fair job, or a poor job?” Drawing by Chas Addams; ©1982 The New Yorker Magazine, Inc.

Image source: Santrock

Examples of self-reports and surveys:

- How many hours per week do most people watch violent TV programs?
- How is customer service at Home Depot, Office Depot, Red Robin, etc.?
- How do you feel toward your President?
- What do you give your boyfriend/girlfriend for St. Valentine’s Day?
- An Industrial/Organizational psychologist tests to see if wearing nametags make the employees happier with their work.
- A Personality psychologist explores whether extroverted people have more fun at parties than introverted people.

Advantages of self-reports and surveys:

- A large amount of information can be acquired quickly.
- Accurately predictions of large-scale trends can sometimes be made.

Disadvantages of self-reports and surveys:

- Generalizing may be questionable unless persons surveyed are a representative sample of a larger population. Many “call-in” or magazine surveys do not use a representative sample. Most are self-selected and represent a small slice of the population.
- Responses provided may be inaccurate due to a person’s lack of awareness of their own attitudes and biases.
- The characteristics of the interviewer may influence the response.
- Interpretation of the answers may be difficult, especially with a biased survey.
- Surveys lack the ability to explain.

Self-Reports and Surveys

Self-reports and surveys are quite common. However, there are several pitfalls that people can commit when implementing self-reports and surveys that will make the data produced not very useful or misleading.

When collecting data with surveys, you need to be careful about

- self-report bias and respondents may not know their preferences,
- leading questions,
- choice of words, and
- the sample of people selected. Is the sample representative of the much larger population.

Without these considerations, subtle details in your self-report and surveys can distort your conclusions.

Problems with Self-Reports and Surveys: Self-report bias

A common problem with self-report methods and surveys is that people's answers can involve a self-report bias. They may not want to reveal information that is embarrassing or socially unacceptable. They may provide responses that is socially acceptable and does not deviate too far from social norms such as topics involving

- sexual behavior
- stereotypes, prejudicial attitudes or discriminatory behavior.
- honesty

In addition, people may not know what their preferences and may make guess based on context.

Problems with Self-Reports and Surveys: Leading Questions

How you ask a question can influence how a participant will respond to questions in a self-report or survey. Scientific and quality surveys minimize leading questions (you can't eliminate them), though some political surveys might use them to influence voter and their perception of issues.

Examples of good questions:

- Which candidate do you plan to support?
- Do you think that increased parking fees would be a good idea or a bad idea?

Examples of bad questions:

- Do you plan on supporting Kamala Harris?
- Do you plan on supporting Donald Trump?
- Are Macs better than PCs?
- Is Captain Picard better than Captain Kirk?

“Surveys” with leading questions may not be interested in what you think, but may be interested in selling a product, candidate or policy.

Problems with Self-Reports and Surveys: Word Choice

In addition to how a question is phrased, small changes in words can affect the outcome of a survey. For example:

| DO YOU FAVOR OR OPPOSE _____ BEING ALLOWED TO SERVE OPENLY? | | |
|---|---------------|----------------------|
| | "Homosexuals" | "Gay Men & Lesbians" |
| Favor | 44% | 58% |
| Oppose | 42% | 28% |

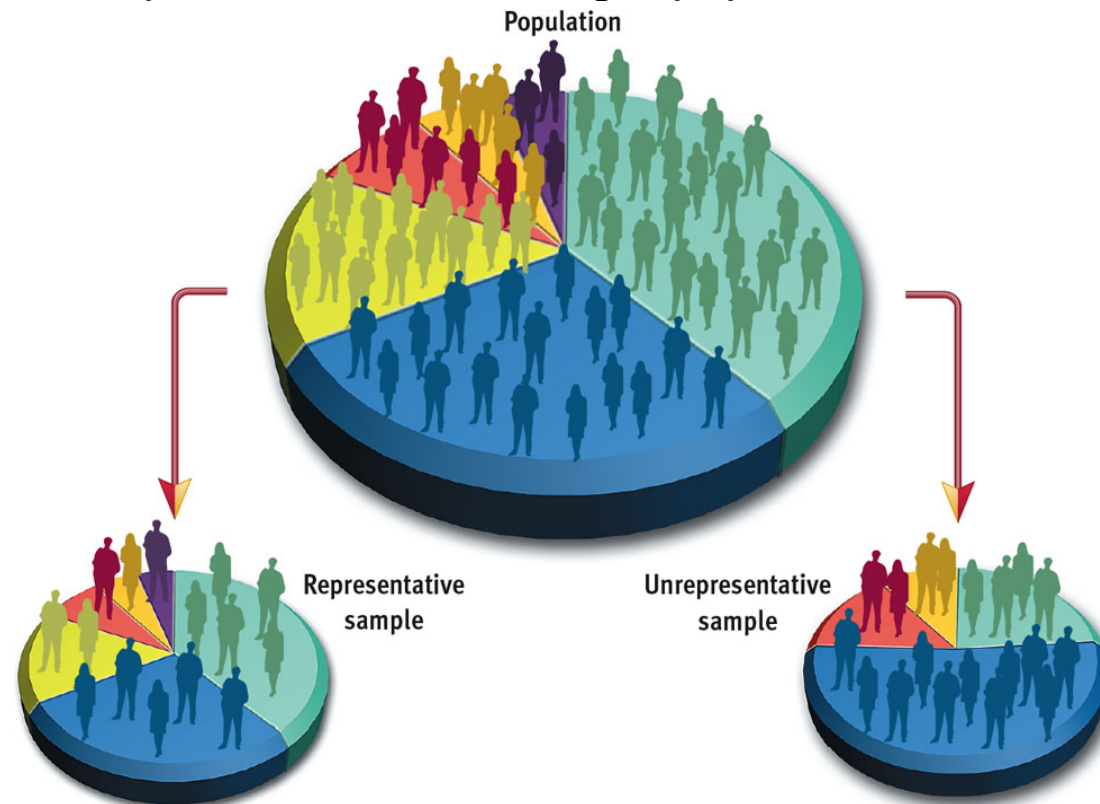
Image source: CBS

While there is no real descriptive difference between "homosexuals" and "gay men and lesbians", there is an emotional and cognitive difference. The emotional and cognitive difference affects how people respond to their opinions.

If you don't know much about the topic or thought about the topic, we react emotionally (see peripheral route of persuasion, [chapter 12](#)).

Problems with Surveys: Unrepresentative Samples

You cannot survey the entire population to find out what they think. You can take a smaller sample and have a 95% confidence interval that your sample is similar to the larger population as long as your sample is a representative of the population—the sample resembles the larger population.



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Image source: Weiten

Most call-in internet, television and radio show participants have strong beliefs and choose to volunteer their opinions and thus do not resemble the larger population.

Examples of non-representative samples:

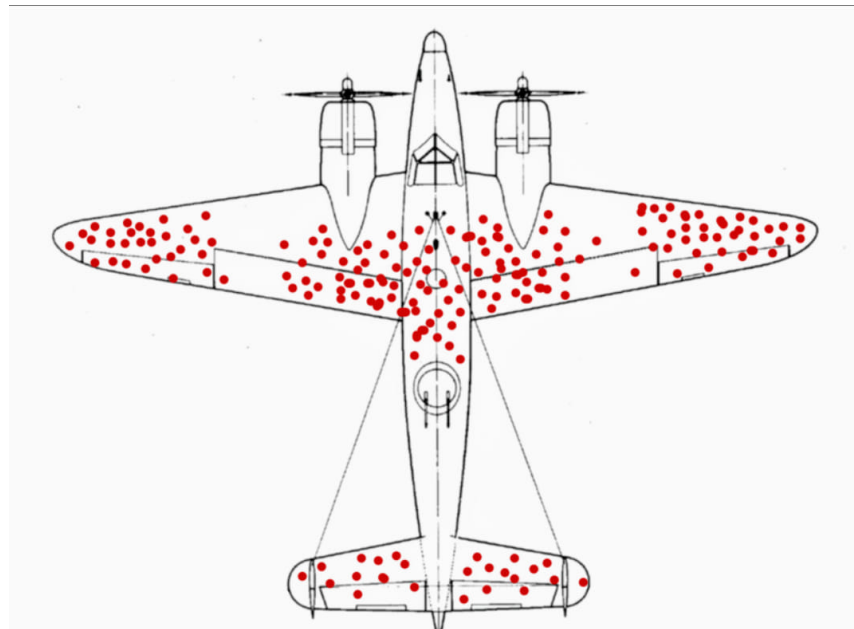
- A senator is interested in whether his constituents favor the death penalty. His staff reports that letters about the death penalty have been received from 854 constituents and 654 favor it.
- A cookie manufacturing company wants to know what percentage of Denver residents make cookies from scratch. A sample of 1,000 residential addresses is chosen and interviewers call these households during regular working hours on weekdays.
- A newspaper is interested in finding out what proportion of drivers in the city wear seat belts. Some reporters go to a GM plant and record the number of employees who fasten their set belts when they leave work.

Consequences of an Unrepresentative Sample



During WWII, the Navy tried to determine where they needed to armor their aircraft to ensure they came back home. They ran an analysis of where planes had been shot up, and came up with this.

Obviously the places that needed to be up-armored are the wingtips, the central body, and the elevators. That's where the planes were all getting shot up.



Abraham Wald, a statistician, disagreed. He thought they should better armor the nose area, engines, and mid-body. Which was crazy, of course. That's not where the planes were getting shot.

Except Mr. Wald realized what the others didn't. The planes were getting shot there too, but they weren't making it home. What the Navy thought it had done was analyze where aircraft were suffering the most damage. What they had actually done was analyze where aircraft could suffer the most damage without catastrophic failure. All of the places that weren't hit? Those planes had been shot there and crashed. They weren't looking at the whole sample set, only the survivors.

Scott Osborn

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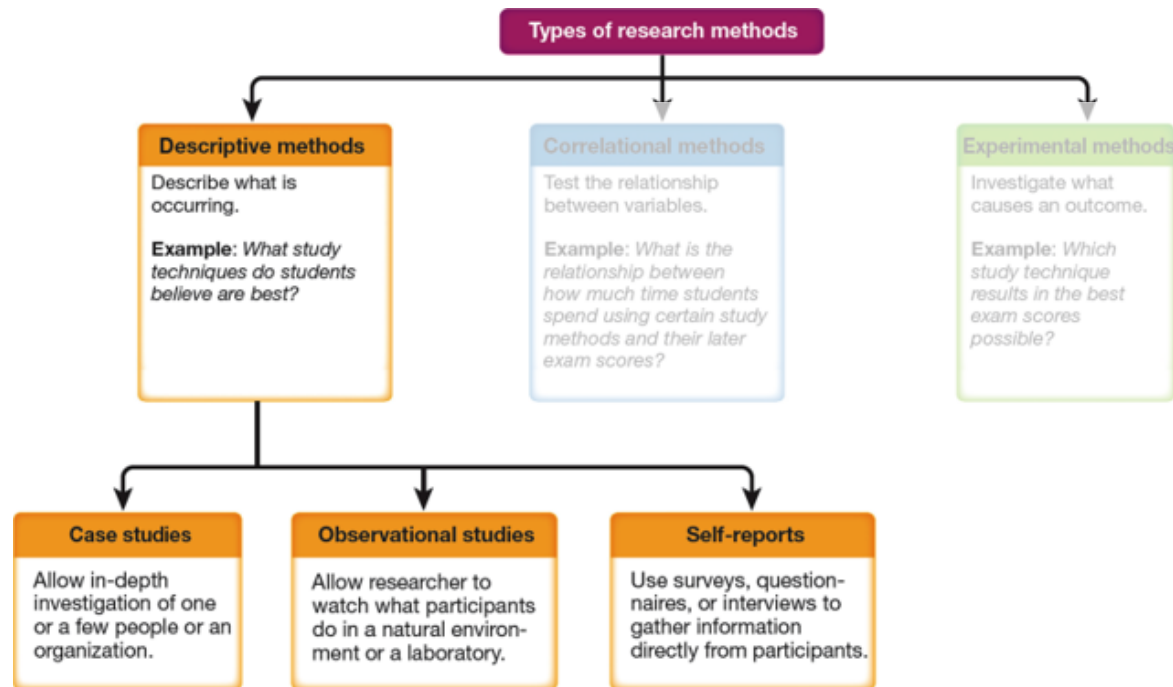


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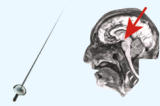


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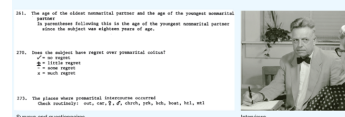


FIGURE 1.22 Self-Reports

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