

CHAPTER 1

Introduction to Research

LEARNING OBJECTIVES

1. Determine the nature of behavioral research and why it is conducted.
2. Determine the limitations of “everyday science” and intuition for understanding behavior.
3. Understand what the scientific method is and why it is used by scientists.
4. Understand the difference between facts and values and how the values of scientists influence their own research.
5. Determine the goals of basic and applied research and to understand how these are related.
6. Understand the goals, advantages, and disadvantages of descriptive, correlational, and experimental research.
7. Illustrate the gains from learning how to conduct, evaluate, and critically evaluate research.

ESSAY QUESTIONS

1. Define the term *converging operations* and indicate its meaning in behavioral research.
2. What is the difference between values and facts? How do each play a role in behavioral research?
3. List the three different research designs used to study behavior. Give one specific example of each approach that is not mentioned in the textbook. What are the advantages and disadvantages of each approach?
4. How *do* and *should* the values and beliefs of the scientist influence his or her research?
5. Briefly describe three hypothetical studies: one that involves descriptive research, one that involves correlational research, and one that involves experimental research. Explain why your proposed studies are examples of each research design.
6. What is the scientific method and why is it used?
7. Explain why behavioral research cannot be referred to as “common sense.”
8. Differentiate basic research from applied research, and give an example of each that was not mentioned in the textbook.

MULTIPLE-CHOICE QUESTIONS

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1. The basic goal of behavioral research is to
 - a. change how people interact with each other.
 - b. make scientific research more like philosophy.
 - c. study the behavior of humans and animals.
 - d. change political attitudes.

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Ans: c
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Ans: c
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Ans: b
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LO: 3

Ans: b
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Type: C
LO: 3

Ans: d
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Ans: b
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Type: F
LO: 6

Ans: c
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Type: F
LO: 6

2. Scientific research is empirical. This means that it is based on
 - a. rational reflection.
 - b. logical reasoning.
 - c. systematic collection and analysis of data.
 - d. prior theorizing.
3. One of the most important uses of behavioral research is to
 - a. prevent unwanted technological development.
 - b. change the moral behavior of individuals.
 - c. study and provide solutions to important human problems.
 - d. discipline scientists who conduct unethical research.
4. Statements that are based on a systematic collection and analysis of data are called
 - a. value-laden.
 - b. empirical.
 - c. subjective.
 - d. rational.
5. Behavioral scientists believe that the best tool for understanding human behavior is to
 - a. pay close attention to the beliefs of experts.
 - b. conduct empirical research.
 - c. combine the ideas of many people into systematic statements.
 - d. ask individuals about their personal habits.
6. Behavioral scientists draw conclusions about human behavior primarily by
 - a. analyzing the statements of other scientists.
 - b. reading journal articles.
 - c. using intuition.
 - d. collecting and analyzing data.
7. In research by Nisbett and Wilson, research participants read information about a woman who spilled coffee during a job interview. The surprising finding of this study was that
 - a. research participants were quite accurate in indicating why they liked or did not like the applicant.
 - b. although the research participants believed that spilling coffee made them like the applicant less, it actually made them like her more.
 - c. although the research participants did not know it, spilling coffee actually made them like the woman less.
 - d. there was no observed relationship between the spilling of coffee and the research participants' liking of the woman.
8. Which of the following is predicted by the hindsight bias?
 - a. People will perceive that time goes by faster as they get older.
 - b. It will be easier to remember events that happened in the recent past than to remember events that happened a long time ago.
 - c. Events that have already occurred will be judged as being more likely to have occurred than they would have been before they occurred.
 - d. Events that are easy to imagine will be judged as being more likely than events that are less easy to imagine.

Ans: c
Page: 7-9
Type: C
LO: 6

Ans: b
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Ans: b
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LO: 3

Ans: a
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Ans: d
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Type: F
LO: 3

Ans: c
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Ans: a
Page: 11
Type: C
LO: 5

Ans: b
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Type: C
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9. It is not usually a good idea to rely upon people's intuition about the causes of behavior because
 - a. people cannot report on their intuition.
 - b. people don't usually tell the truth.
 - c. people can be inaccurate about why they do what they do.
 - d. intuition is too much related to extrasensory perception.
10. Facts are examples of statements that are free from bias or personal emotion. This means that facts are
 - a. variable.
 - b. objective.
 - c. empirical.
 - d. data.
11. The major difference between scientists and others who study social behavior is that scientists
 - a. are more expert about human behavior.
 - b. use an empirical approach.
 - c. have more valid personal experiences.
 - d. take a more logical approach.
12. The scientific method is designed to help produce
 - a. the accumulation of knowledge.
 - b. the exclusion of all values from the scientific process.
 - c. a research project that can be easily replicated.
 - d. changes in social policy.
13. Which of the following is NOT accomplished by the scientific method?
 - a. The collective data are reported so that they can be scrutinized by the public and by other scientists.
 - b. People can use the reported data to draw their own conclusions.
 - c. The scientist makes clear exactly how he or she has collected the data.
 - d. There is no longer any question about how to interpret data.
14. Which of the following is true about scientific facts?
 - a. They can never be shown to be false.
 - b. They cannot be used to help people determine their personal values.
 - c. They are determined to be accurate on the basis of empirical study.
 - d. They are personal beliefs about the domain of scientific inquiry.
15. A scientist who studies how clinical psychotherapy can be used to improve the mental health of depressed patients is conducting
 - a. applied research.
 - b. correlational research.
 - c. variable research.
 - d. experimental research.
16. Which one of the following journal article titles most likely represents an example of basic research?
 - a. "Teaching children to offer assistance"
 - b. "How individuals perceive others: A test of attribution theory"
 - c. "Effect of size and lettering style of signs on finding one's way in a hospital"
 - d. "Encouraging volunteering: Evaluating an advertising campaign"

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Ans: d
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17. In which of the following sections of the research report are the values of the scientists most likely to be expressed?
- Methods and Results
 - Introduction and Results
 - Results and Discussion
 - Introduction and Discussion

Ans: d
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Type: F
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18. Which of the following four sections are found in a research report?
- Introduction, Methods, Interpretation, Summary
 - Introduction, Methods, Interpretation, Analysis
 - Introduction, Analysis, Interpretation, Summary
 - Introduction, Methods, Results, Discussion

Ans: b
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Type: C
LO: 4

19. An example of basic research is the study of
- what types of psychotherapy are most effective.
 - how nerves conduct responses from the receptors in the skin to the brain.
 - what types of ad campaigns reduce drug and alcohol consumption.
 - what factors are associated with successful college performance.

Ans: b
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Type: F
LO: 4

20. Which one of the following items should NOT be influenced by the values of the scientist?
- The topic chosen for study
 - Whether the collected data are objectively analyzed and reported
 - When and where research is published
 - The participants chosen for study

Ans: b
Page: 11
Type: F
LO: 4

21. One of the important goals of science is to
- make the research process entirely objective and to not allow the values of the scientist to be involved.
 - to help distinguish which part of the research process is objective and which part is subjective.
 - to turn applied research into basic research.
 - to make behavioral research more like research in the natural sciences.

Ans: a
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Type: F
LO: 6

22. A research design is
- a specific method used to collect, analyze, and interpret data.
 - an approach to thinking about causal relationships.
 - a type of correlational study.
 - a method of applied research.

Ans: a
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Type: F
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23. Quantitative research relies on _____, whereas qualitative research relies on _____
- the formal measurement of behavior followed by statistical analysis; the complete description of behavior in its original raw form.
 - the complete description of behavior in its original raw form; the formal measurement of behavior followed by statistical analysis.
 - experimental research designs; correlational research designs.
 - correlational research designs; experimental research designs.

Ans: d
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Type: C
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Ans: b
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Type: C
LO: 7

Ans: d
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Type: C
LO: 7

Ans: d
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Type: C
LO: 7

Ans: c
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Type: C
LO: 7

Ans: c
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Type: C
LO: 7

Ans: a
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Type: F
LO: 7

24. Research designed to provide a picture of the current state of affairs is known as
- applied research.
 - basic research.
 - relational research.
 - descriptive research.
25. A survey that reports the average income of all citizens in Washington, D.C. is most likely an example of
- correlational research.
 - descriptive research.
 - naturalistic observation.
 - experimental research.
26. A survey researcher conducts a poll that indicates that 54 percent of the population of a city favors the Democratic candidate. The researcher's data represent which of the following?
- Basic research
 - Correlational research
 - Naturalistic operations
 - Descriptive research
27. A scientist predicts that individuals who have naturally high levels of adrenaline will also have high levels of anxiety. The appropriate research design to test this hypothesis is
- experimental.
 - descriptive.
 - predictive.
 - correlational.
28. A researcher who uses knowledge of a person's intelligence to predict an ability to do well as a lawyer is using which type of research design?
- Descriptive
 - Experimental
 - Correlational
 - Causational
29. Because the ability to play golf differs from person to person, it can be considered
- a predictor.
 - a manipulation.
 - a variable.
 - a relationship.
30. The Pearson product-moment correlation coefficient is
- a statistic used to assess the direction and the size of the relationship between two variables.
 - a statistic used to indicate the central tendency of descriptive data.
 - a procedure used to create experimental manipulations.
 - a statistic used to compare groups of individuals in experimental research.

Ans: b
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Type: C
LO: 7

31. Which of the following correlation coefficients is the strongest?

- a. $r = .42$
- b. $r = -.48$
- c. $r = .45$
- d. $r = -.26$

Ans: d
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Type: C
LO: 7

32. A researcher wants to test whether the attachment of a child to a primary caregiver will predict how trusting that child will be in future romantic relationships. She uses a self-report measure of the participant's relationships when they were young and a Likert scale measuring their trust behavior as adults. What kind of research design is this?

- a. Experimental
- b. Empirical
- c. Descriptive
- d. Correlational

Ans: a
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Type: C
LO: 7

33. It is hypothesized that people are more attracted to those people that they see more often. What type of correlation is predicted between the frequency of seeing someone and attraction?

- a. A positive correlation
- b. A negative correlation
- c. A zero correlation
- d. No correlation can be conducted on these variables

Ans: b
Page: 16
Type: C
LO: 7

34. What type of research design would most likely be used to study whether the seating positions that students choose predict their final grade in the class?

- a. Descriptive
- b. Correlational
- c. Experimental
- d. Basic

Ans: b
Page: 16
Type: C
LO: 7

35. It is hypothesized that having lived for a longer time in an integrated neighborhood will be related to having a less racist attitude. Which type of correlation is predicted between length of time living in the neighborhood and racist attitudes?

- a. Positive
- b. Negative
- c. Unknown
- d. Reliable

Ans: b
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Type: A
LO: 7

36. Janet sets out on a trip in her car to visit her boyfriend who lives a few hours away. Which of the following Pearson correlation coefficients could represent the correlation between the number of miles that she drives and the gallons of gas that her car uses?

- a. $-.81$
- b. $.65$
- c. 1.24
- d. 0.00

Ans: d
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Type: F
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Ans: a
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Type: F
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Ans: a
Page: 18
Type: C
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Ans: a
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Type: F
LO: 7

Ans: c
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Type: F
LO: 7

Ans: d
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Type: C
LO: 7

Ans: d
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Type: C
LO: 7

37. Experiments
 - a. cannot normally be conducted in behavioral research because variables cannot be controlled.
 - b. cannot be used to determine the causal relationships among variables.
 - c. are the most useful type of research design.
 - d. involve the manipulation of a given situation or experience for two or more groups of individuals.
38. In an experiment, the independent variable is
 - a. created by the experimenter.
 - b. collected from the research participant.
 - c. correlated with the predictor variable.
 - d. correlated with the outcome variable.
39. Dr. Zilgar has two groups of students who are otherwise equivalent study a chapter in a textbook. One group is assigned to study while classical music is playing and the other group is assigned to study while rock music is playing. He then measures how much they learn about the chapter. Dr. Zilgar's research design is
 - a. experimental.
 - b. correlational.
 - c. descriptive.
 - d. behavioral.
40. A disadvantage of experimental research designs is that
 - a. there are some things that cannot be experimentally manipulated.
 - b. they are often conducted in schools and institutions.
 - c. causal relationships are difficult to determine.
 - d. they use a measured dependent variable.
41. A causal relationship can only be inferred through the use of which type of research?
 - a. Descriptive research
 - b. Relational research
 - c. Experimental research
 - d. Causal research
42. Which of the three types of research designs can be considered the best?
 - a. Experimental research
 - b. Correlational research
 - c. Descriptive research
 - d. Each of the designs has some strengths and some limitations.
43. The question "How many people in a given age group are divorced?" would be answered using _____ research, whereas the question "Do people with more money divorce more often?" would be answered using _____ research.
 - a. Descriptive; experimental
 - b. Correlational; experimental
 - c. Predictive; descriptive
 - d. Descriptive; correlational

Ans: d
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Type: C
LO: 7

44. Which of the following represents a converging operations approach?
- A scientist who conducts a correlational research design
 - A scientist who conducts an experiment
 - A scientist who conducts many different descriptive research projects
 - A scientist who conducts an experimental, a correlational, and a descriptive research project with the hopes that the findings from each project will show similar results

Ans: c
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Type: A
LO: 7

45. When Giwanda begins studying for her research methods test, she uses the strategy of making flash cards, reading the textbook carefully, quizzing with her study mates, and being sure to get a good night's sleep the night before the test. Giwanda's approach to studying could be considered a type of
- experimental research design.
 - descriptive research design.
 - converging operations.
 - applied research.

Ans: d
Page: 8
Type: F
LO: 3

46. Why do researchers use the scientific method to study human behavior?
- Because intuition is insufficient to determine truths about human behavior.
 - Because the scientific method allows new results to be added to a growing body of empirical knowledge.
 - Because the scientific method helps separate the personal bias or emotions of the scientist from more objective conclusions.
 - All of the above are reasons why researchers use the scientific method.

Ans: b
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Type: F
LO: 7

47. Descriptive research has which of the following advantages?
- The data used in descriptive research generally involve unusual and unexpected events.
 - Descriptive research helps provide a snapshot of behavior as it occurs in everyday life.
 - Descriptive research is more likely than other research to be published in mainstream journals and publications.
 - Descriptive research assesses the relationships among variables.

Ans: a
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Type: C
LO: 7

48. Which of the following statements about human behavior is best tested using a correlational research design?
- People who drink alcohol more frequently are also less likely to practice safe sex.
 - A decrease in daily temperature can cause a decrease in mood.
 - Children frequently talk to themselves even when they are playing with other children.
 - Good grades are caused by sitting in front of the class.

Ans: d
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Type: C
LO: 5

49. Which of the following best differentiates basic research from applied research?
- Basic research represents a broader and more informative study of human behavior than does applied research.
 - Basic research answers more specific questions about human behavior than does applied research.
 - Basic research is not useful without applied research.
 - Basic research concerns the fundamental relationships between variables, whereas applied research addresses specific social or practical problems.

Ans: a
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Type: A
LO: 7

50. Which of the following describes a correlational research design?
- Anita investigates the relationship between the amount of time children spend watching television at home and their helping behaviors at school.
 - Franklin conducts a survey that measures the average number of hours of television watched per day in Japan.
 - Jamal observes children for one month, taking notes on the number of altruistic behaviors performed.
 - Sarah assigns groups of children to watch different amounts of television each day. After one month Sarah compares the number of altruistic behaviors of each group.

Ans: c
Page: 4
Type: F
LO: 1

51. Behavioral scientists are most likely to say that their work involves which of the following?
- Changing social behaviors
 - Studying philosophical questions
 - Investigating the behavior of humans and animals
 - Developing political strategies to improve everyday life

Ans: c
Page: 4
Type: F
LO: 2

52. Which of the following terms describes the systematic collection and analysis of data?
- experimental
 - logical
 - empirical
 - tautological

Ans: c
Page: 19
Type: F
LO: 2

53. Which of the following represents a disadvantage of experimental research designs?
- They are more difficult to conduct than observational research.
 - They are often conducted in the field.
 - Some variables cannot be manipulated
 - They use a measured dependent variable.

Ans: a
Page: 16
Type: F
LO: 2

54. It is hypothesized that people with high self-esteem have a higher grade point average than do those with low self-esteem. What type of correlation is predicted between self-esteem and grade point average?
- A positive correlation
 - A negative correlation
 - A zero correlation
 - No correlation can be conducted on these variables.

Ans: c
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Type: F
LO: 2

55. Freddie likes to be sure that he does not get stuck in the rain. In the morning he listens to the weather on the radio, checks the weather in the newspaper, and also looks out his apartment window. Freddie's actions could be considered a type of
- observational research design.
 - correlational research design.
 - converging operations.
 - basic research.

Ans: c
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Type: C
LO: 1

566. In the research by Brendl, Chattopadhyay, Pelham, and Carvallo (2005) on preference for letters of one's own name, the participants drank two teas, one that contained letters of their own name and one that contained letters of another person's name. This systematic variation, which was created by the research, means that the research was which of the following?
- Observational research
 - Correlational research
 - Experimental research
 - Applied research

Ans: a
Page: 20-21
Type: F
LO: 1

57. Which of the following were observed results of the research of Brendl, Chattopadhyay, Pelham, and Carvallo (2005) on preference for letters of one's own name?
- Participants preferred teas that included the letters of their own name.
 - Participants guessed that the study had been rigged.
 - Participants were aware of the causes of their behavior.
 - Participants wrote about an aspect of themselves that they would like to change.