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CHAPTER 1

Why the Social Researcher Uses Statistics

Chapter 1: Multiple Choice Questions

1. A hypothesis is a(n):
- a. fundamental unit of scientific observation.
 - b. statement of the relationship between two or more variables.
 - c. scientific fact of truth.
 - d. observable and measurable variable.
- Answer: b. statement of the relationship between two or more variables.
Objective: Factual
Page number: 2
Level: Basic

2. In a hypothesis, the presumed cause is called the:
- a. dependent variable.
 - b. independent variable
 - c. aggregate.
 - d. constant.
- Answer: b. independent variable.
Objective: Factual
Page number: 2
Level: Basic

3. In a hypothesis, the presumed effect is called the:
- a. dependent variable.
 - b. independent variable.
 - c. aggregate.
 - d. constant.
- Answer: a. dependent variable.
Objective: Factual
Page number: 2
Level: Basic

Instructions: Questions 4-7 refer to the following situation:

A social work student is interested in studying the relationship between an adult's age and their view on off-shore drilling. The student plans to compare adults who consider themselves Extremely anti-drilling, Anti-drilling, Neutral, Pro-drilling, and Extremely pro-drilling.

4. The dependent variable is:
- a. age.
 - b. view on off-shore drilling.

- c. state in which the person lives.
- d. none of the above

Answer: b. view on off-shore drilling.
Objective: Conceptual
Page number: 2
Level: Basic

5. What level of measurement is 'view on off-shore drilling' for this research question?

- a. Nominal
- b. Ordinal
- c. Interval/ratio
- d. None of the above

Answer: b. Ordinal
Objective: Conceptual
Page number: 12-14
Level: Basic

6. The researcher chose to measure age as a number between 18 and 110. What level of measurement is age for this research question?

- a. Nominal
- b. Ordinal
- c. Interval/ratio
- d. None of the above

Answer: c. Interval/ratio
Objective: Conceptual
Page number: 12-14
Level: Basic

7. The independent variable is:

- a. age
- b. view on off-shore drilling
- c. state in which the person lives
- d. none of the above

Answer: a. age
Objective: Conceptual
Page number: 2
Level: Basic

8. The stages of research do NOT always include:

- a. data collection.
- b. data analysis.
- c. algebra.
- d. interpretation of results.

Answer: c. algebra
Objective: Factual
Page number: 11

Level: Basic

9. Social researchers can use measurement to:

- a. name or categorize data.
- b. rank order data.
- c. assign a score.
- d. all of the above

Answer: d. all of the above

Objective: Factual

Page number: 11

Level: Basic

10. Nominal measurement is used primarily to:

- a. name or categorize data.
- b. rank order data.
- c. both of the above
- d. none of the above

Answer: a. name or categorize data.

Objective: Factual

Page number: 12

Level: Basic

11. Ordinal measurement is used primarily to:

- a. assign a score.
- b. rank order data.
- c. both of the above
- d. none of the above

Answer: b. rank order data.

Objective: Factual

Page number: 13-14

Level: Basic

12. Interval/ratio measurement is used primarily to:

- a. name or categorize data.
- b. assign a score.
- c. both of the above
- d. none of the above

Answer: b. assign a score.

Objective: Factual

Page number: 13-15

Level: Basic

13. A social researcher is interested in studying the relationship between an abstinence-only program and teen pregnancy. To test her hypothesis, she compares the results of 50 teens participating in an abstinence-only program to 50 teens participating in a more conventional sex-education program. What type of research is this?

- a. Experiment
- b. Survey
- c. Content analysis
- d. Secondary analysis

Answer: a. Experiment

Objective: Conceptual

Page number: 3-9

Level: Intermediate

14. A team of researchers is interested in determining how national political figures have been depicted historically on TV. The researchers painstakingly review the content of archival video footage to determine how objective and accurate the depictions are. What type of research is this?

- a. Experiment
- b. Survey
- c. Content analysis
- d. Secondary analysis

Answer: c. Content analysis

Objective: Conceptual

Page number: 3-9

Level: Intermediate

15. The United States census occurs every 10 years and aims to have each American household answer a series of questions. What type of research is this?

- a. Experiment
- b. Survey
- c. Content analysis
- d. Secondary analysis

Answer: b. Survey

Objective: Conceptual

Page number: 3-9

Level: Intermediate

16. A social researcher is interested in studying patients' sense of spirituality to see if it correlates with how well they respond to treatment. She only reviews archival data previously collected in a scientific manner. What type of research is this?

- a. Experiment
- b. Survey
- c. Content analysis
- d. Secondary analysis

Answer: d. Secondary analysis

Objective: Conceptual

Page number: 3-9

Level: Intermediate

17. Statistics may be used for:

- a. description
- b. decision making
- c. both of the above
- d. none of the above

Answer: c. both of the above

Objective: Factual

Page number: 18-23

Level: Basic

18. Which of the following is *not* true of the survey method?

- a. Surveys often seek to reconstruct influences after they have occurred.
- b. Surveys tend to be more representative than experiments.
- c. Surveys establish cause and effect better than experiments.
- d. Surveys usually measure but do not manipulate variables.

Answer: c. Surveys establish cause and effect better than experiments

Objective: Factual

Page number: 4-5

Level: Basic

19. Which of the following is *not* a research strategy?

- a. An experiment
- b. A survey
- c. Participant observation
- d. Interval data

Answer: d. Interval data

Objective: Factual

Page number: 3-9

Level: Basic

20. Joining a radical environmentalist group to understand group dynamics and gather data over time is an example of which research strategy?

- a. An experiment
- b. Meta-analysis
- c. Participant observation
- d. A survey

Answer: c. Participant observation

Objective: Conceptual

Page number: 3-9

Level: Basic

21. In which of the following research strategies is the independent variable manipulated?

- a. An experiment
- b. A survey
- c. Participant observation
- d. All of the above

Answer: a. An experiment

Objective: Factual
Page number: 3-4
Level: Basic

22. In an experiment, the group not subject to experimental manipulation is called the _____ group.

- a. treatment
- b. independent
- c. random
- d. control

Answer: d. control

Objective: Factual
Page number: 3-4
Level: Basic

23. The concept of "mutually exclusive" means that:

- a. there is a category for every case that arises.
- b. there is an order to every set of numbers.
- c. there is one, and only one, category for every case.
- d. None of the above

Answer: c. there is one, and only one, category for every case

Objective: Factual
Page number: 12
Level: Basic

24. "Exhaustive" means that:

- a. there is a category for every case which arises.
- b. there is an order to every set of numbers.
- c. there is one, and only one, category for every case.
- d. None of the above

Answer: a. there is a category for every case that arises

Objective: Factual
Page number: 12
Level: Basic

25. Which of the following is *not* a requirement of the nominal scale of measurement?

- a. The cases are mutually exclusive
- b. The cases are mutually exhaustive
- c. There are equal intervals between the cases
- d. None of the above

Answer: c. There are equal intervals between the cases

Objective: Factual
Page number: 12
Level: Basic

Chapter 1: True-False Questions

1. The survey method is used to manipulate the independent variable.

a. True

b. False

Answer: b. False

Objective: Factual

Page number: 4-5

Level: Basic

2. The dependent variable affects the independent variable.

a. True

b. False

Answer: b. False

Objective: Factual

Page number: 2

Level: Basic

3. Variables measured at the nominal level only categorize or classify data.

a. True

b. False

Answer: a. True

Objective: Factual

Page number: 12

Level: Basic

4. In the experimental method, the independent variable(s) can be manipulated.

a. True

b. False

Answer: a. True

Objective: Factual

Page number: 3-4

Level: Basic

5. Variables measured at the interval level are assigned a score.

a. True

b. False

Answer: a. True

Objective: Factual

Page number: 13-15

Level: Basic

6. Variables measured at the interval level cannot be used to classify, categorize, or rank order data.

a. True

b. False

Answer: b. False

Objective: Factual
Page number: 13-15
Level: Basic

7. Variables measured at the ordinal level cannot be used to classify or categorize data.

a. True

b. False

Answer: b. False

Objective: Factual

Page number: 12-13

Level: Basic

8. Statistics cannot be used to describe.

a. True

b. False

Answer: b. False

Objective: Factual

Page number: 18-21

Level: Basic

9. Statistics are often used to make inferences about a population.

a. True

b. False

Answer: a. True

Objective: Factual

Page number: 21-24

Level: Basic

10. Meta-analysis is the process of combining the results obtained in a number of previous studies and subjecting them all to a single significance test.

a. True

b. False

Answer: a. True

Objective: Factual

Page number: 8-9

Level: Basic

11. Ordinal level data may be treated as interval if the ordered categories are evenly spaced.

a. True

b. False

Answer: a. True

Objective: Factual

Page number: 15-17

Level: Basic

Chapter 1: Work Questions

Instructions: classify the measurement type in each of the following examples as:

- a. Nominal
- b. Ordinal
- c. Interval/ratio

1. An individual's religious affiliation

Answer: a. Nominal
Objective: Conceptual
Page number: 12-15
Level: Intermediate

2. A person's occupation

Answer: a. Nominal
Objective: Conceptual
Page number: 12-15
Level: Intermediate

3. A person's IQ score

Answer: c. Interval/ratio
Objective: Conceptual
Page number: 12-15
Level: Intermediate

4. A person's age in years

Answer: c. Interval/ratio
Objective: Conceptual
Page number: 12-15
Level: Intermediate

5. A person's hair shade (very light, light, medium, dark, very dark)

Answer: b. Ordinal
Objective: Conceptual
Page number: 12-15
Level: Intermediate

6. An individual's racial background

Answer: a. Nominal
Objective: Conceptual
Page number: 12-15

Level: Intermediate

7. A person's hair color (red, brown, blonde, etc.)

Answer: a. Nominal

Objective: Conceptual

Page number: 12-15

Level: Intermediate

8. Someone's comprehension of another language (illiterate, read/speak somewhat, fluent)

Answer: b. Ordinal

Objective: Conceptual

Page number: 12-15

Level: Intermediate

9. A person's highest degree earned (less than high-school, completed high-school, some college, etc.)

Answer: b. Ordinal

Objective: Conceptual

Page number: 12-15

Level: Intermediate

10. The number of children a person has

Answer: c. Interval/ratio

Objective: Conceptual

Page number: 12-15

Level: Intermediate

Chapter 1: Why the Social Researcher Uses Statistics

1. A social researcher who joins a group of skinheads in order to study their recruiting tactics employs the method of research known as
 - a. the experiment.
 - b. meta-analysis.
 - c. content analysis.
 - d. participant observation.
 - e. secondary analysis.

Answer: (d) participant observation

2. A researcher who spends several months working at a fast-food restaurant to understand what it is like to work in the service industry engages in what type of research?
 - a. Experimental research
 - b. Content analysis
 - c. Secondary analysis
 - d. Participant observation
 - e. Survey research

Answer: (d) Participant observation

3. A psychologist divides subjects in a research study into groups where they receive either a placebo or an experimental medication. What type of research is this?
 - a. Experimental research
 - b. Content analysis
 - c. Secondary analysis
 - d. Participant observation
 - e. Survey research

Answer: (a) Experimental research

4. A sociologist is interested in how domestic violence is reported in the media, and analyzes news articles from a large city over the course of a year. What type of research is this?
- a. Experimental research
 - b. Content analysis
 - c. Secondary analysis
 - d. Participant observation
 - e. Survey research

Answer: (b) Content analysis

5. Someone who ranks a list of cities from slowest to fastest pace of life is operating at the _____ level of measurement.
- a. nominal
 - b. ordinal
 - c. interval

Answer: (b) ordinal

6. A researcher who scores a set of respondents (from 0 to 10) in terms of their degree of empathy for accident victims is working at the _____ level of measurement.
- a. nominal
 - b. ordinal
 - c. interval

Answer: (c) interval

7. A social researcher ranks industries based on how much they contribute to a country's gross domestic product. What level of measurement is this considered?
- a. Nominal
 - b. Ordinal
 - c. Interval

Answer: (b) Ordinal

8. A sociologist collects information from high school teachers about their job satisfaction. For each of the following items, indicate the level of measurement—nominal, ordinal, or interval:
- What field of study do you teach? Math, Science, Social Studies, English, or Other?
 - How many students do you have in a class?
 - On a five-point scale (from strongly favorable to strongly unfavorable), how do you feel about your work?
 - How many years have you been teaching?

Answer:

- Nominal
 - Interval
 - Ordinal
 - Interval
9. A political scientist asks a series of questions to gauge how politically active individuals are. For each of the following items, indicate the level of measurement—nominal, ordinal, or interval:
- Did you vote in the last election? Yes or No?
 - With which political party do you identify? Democrat, Republican, or Independent?
 - How often do you vote in elections? Never, Rarely, Sometimes, or Always?
 - On a 0–10 scale, how “extreme” do you consider your views? 0 is equivalent to mainstream and 10 is equivalent to radical.
 - What level of education have you attained? Bachelor’s, Master’s, or Doctorate?
 - Do you coach a school sports team? Yes or No?

Answer:

- Nominal
- Nominal
- Ordinal
- Interval
- Ordinal
- Nominal

10. The statistical approach involved in generalizing from a sample of 25 patients to an entire population of the hundreds of patients in a particular hospital is known as
- a. description.
 - b. decision making.
 - c. content analysis.
 - d. an experiment.
 - e. secondary analysis.

Answer: (b) decision making

11. A sociologist undertakes a series of studies to investigate various aspects of sports violence. For each of the following research situations, identify the research strategy (experiment, survey, content analysis, or participant observation) and the independent and dependent variables:
- a. Do male and female sports reporters describe combative sporting events (such as football) in the same way? To find out, the sociologist collects the game reports filed by a number of male and female newspaper writers on the day following the Super Bowl. He compares the aggressiveness contained in the adjectives used by the reporters to describe the game.
 - b. Do children react differently after watching combative and noncombative sports? To find out, the sociologist randomly assigns school children to watch taped versions of either a hockey game (combative) or a swimming meet (noncombative). She then observes the aggressiveness of play demonstrated by the children immediately following their viewing of the tapes.
 - c. Are fans more aggressive when their team wins or loses? To find out, the sociologist spends his Saturdays in a sports bar that features the local college game on wide-screen television. He dresses in a team sweatshirt and becomes one of the crowd. At the same time, he observes the extent of arguing and fighting that goes on around him when the team is winning and losing.
 - d. Do levels of personal aggressiveness influence the kinds of sporting events that people prefer to watch? To find out, the sociologist distributes a questionnaire to a random sample of adults. In addition to standard background information, the questionnaire includes a series of items measuring aggressiveness (for example, "How often do you get involved in heated arguments with neighbors or friends?") and a checklist of which sports the respondents like to watch.

Answer:

- a. Content analysis, IV = gender, DV = aggressiveness in description of Super Bowl.
 - b. Experiment, IV = type of sport, DV = aggressiveness of play
 - c. Participant observation, IV = whether team wins or losses, DV = extent of arguing and fighting
 - d. Survey, IV = aggressiveness, DV = preferred sporting events
12. Identify the level of measurement—nominal, ordinal, or interval/ratio—represented in each of the following questionnaire items:
- a. Your sex:
 1. _____ Female
 2. _____ Male
 - b. Your age:
 1. _____ Younger than 20
 2. _____ 20–29
 3. _____ 30–39
 4. _____ 40–49
 5. _____ 50–59
 6. _____ 60–69
 7. _____ 70 or older
 - c. How many people are in your immediate family? _____
 - d. Specify the highest level of education achieved by your mother:
 1. _____ None
 2. _____ Elementary school
 3. _____ Some high school
 4. _____ Graduated high school
 5. _____ Some college
 6. _____ Graduated college
 7. _____ Graduate/professional school
 - e. Your annual income from all sources: _____ (specify)
 - f. Your religious preference:
 1. _____ Protestant
 2. _____ Catholic
 3. _____ Jewish
 4. _____ Other _____ (specify)

- g. The social class to which your parents belong:
1. _____ Upper
 2. _____ Upper-middle
 3. _____ Middle-middle
 4. _____ Lower-middle
 5. _____ Lower
- h. In which of the following regions do your parents presently live?
1. _____ Northeast
 2. _____ South
 3. _____ Midwest
 4. _____ West
 5. _____ Other _____ (specify)
- i. Indicate your political orientation by placing an X in the appropriate space:
- LIBERAL____:____:____:____:____:Conservative
- 1 2 3 4 5

Answer:

- a. Nominal
- b. Interval
- c. Interval
- d. Ordinal
- e. Interval
- f. Nominal
- g. Ordinal
- h. Nominal
- i. Interval (assuming equal intervals between points on scale)

13. For each of the following items, indicate the level of measurement—nominal, ordinal, or interval:
- a. A tailor uses a tape measure to determine exactly where to cut a piece of cloth.
 - b. The speed of runners in a race is timed in seconds by a judge with a stopwatch.
 - c. Based on attendance figures, a ranking of the Top 10 rock concerts for the year is compiled by the editors of a music magazine.
 - d. A zoologist counts the number of tigers, lions, and elephants she sees in a designated wildlife conservation area.
 - e. A convenience store clerk is asked to take an inventory of all items still on the shelves at the end of the month.
 - f. The student life director at a small college counts the number of freshmen, sophomores, The student life director at a small college counts the number of freshmen, sophomores,
 - g. Using a yardstick, a parent measures the growth of his child on a yearly basis.
 - h. In a track meet, runners in a half-mile race were ranked first, second, and third place.

Answer:

- a. Interval
- b. Interval
- c. Ordinal
- d. Nominal
- e. Nominal
- f. Ordinal
- g. Interval
- h. Ordinal

14. A political scientist undertakes a series of studies to find out more about the voting population in her local town. For each of the following research situations, identify the research strategy (experiment, survey, content analysis, participant observation, or secondary analysis):
- Do males vote more than females? To find out, the researcher analyzes data collected by a major polling organization.
 - How many elderly people living in nursing homes vote? To find out, the researcher visits local nursing homes and questions elderly residents to find out how many voted in the last election.
 - How organized is the election process? On Election Day, the researcher goes to a voting site, pretends to be just another voter, and observes how quickly and efficiently voters are moved through the voting process.
 - Are people more likely to vote if they are well informed about the candidates? To find out, the researcher provides detailed information about both candidates to a random group of citizens over the age of 18 and compares their voter turnout on Election Day to that of a random group of citizens over 18 who did not receive the information.

Answer:

- Secondary analysis
 - Survey
 - Participant observation
 - Experiment
15. A researcher who ranks a list of countries according to how much they have depleted their natural resources is working at the _____ level of measurement.
- nominal
 - ordinal
 - interval

Answer: (b) ordinal

16. Governments can be divided into three different types—unitary governments, federal governments, and confederations—depending on where the concentration of power is located. This would be considered which level of measurement?
- Nominal
 - Ordinal
 - Interval

Answer: (a) Nominal

17. A sociologist conducts a survey to determine the effects of family size on various aspects of life. For each of the following questionnaire items, identify the level of measurement (nominal, ordinal, or interval):
- Does family size affect school performance? Students are asked to circle their letter grade (A, B, C, D, or F) in various school subjects.
 - Does family size differ by socioeconomic status? Parents are asked to provide their yearly income in dollars.
 - Does parental health differ by family size? Parents are asked to rate their overall health on a scale from 1 to 5, with 1 being in very good health and 5 being in very poor health.
 - Do the effects of family size differ with race and ethnicity? Respondents are asked to indicate if they are black, white, Hispanic, Asian, or other.

Answer:

- Ordinal
 - Interval
 - Interval (assuming equal intervals between points on scale)
 - Nominal
18. To understand better the lives of homeless people, a researcher decides to live on the streets for one week disguised as a homeless person. Which of the following would describe this research strategy?
- Meta-analysis
 - Content analysis
 - Experiment
 - Participant observation
 - Secondary analysis

Answer: (d) Participant observation

19. A social psychologist is interested in studying how people experience grief. For each of the following situations, identify the research strategy (experiment, survey, content analysis, or participant observation) that she would be using:
- To find out how people cope with the loss of loved ones, the psychologist selects a random sample of people and distributes a questionnaire that asks them to provide information about their personal grieving experiences.
 - The psychologist attends a grief-counseling meeting and pretends that she is one of the mourners (after having obtained permission from the grief counselor). In this way, she is able to observe firsthand how people express their grief.
 - The grief counselor provides the psychologist with several anonymous journals in which people are urged to express their grief by writing down their thoughts and feelings in a stream-of-consciousness manner. The psychologist then reads through the various journal entries in an attempt to find patterns in the way that people experience grief.

Answer:

- Survey
- Participant observation
- Content analysis