Chapter 1 Concepts, Variables, and Measurement

Multiple Choice:

1. Anomie is an example of a _____.
    a. statistic
    b. sociological concept
    c. level of measurement
    d. unit of analysis

Answer: B
Page ref: 9-10

2. A(n) _____ is defined as anything that may vary from one case to the next.
    a. variable
    b. concept
    c. anomaly
    d. level of measurement

Answer: A
Page ref: 11

3. A logical set of characteristics for a variable is referred to as:
    a. concepts
    b. variables
    c. attributes
    d. units of analysis

Answer: C
Page ref: 11

4. Suppose a researcher hypothesizes that an increase in education leads to increased income. What is the independent variable?
    a. years of education
    b. income
    c. both a and b
    d. none of the above

Answer: A
Page ref: 12-13

5. Identify the dependent variable in the following hypothesis: If age increases then income increases.
    a. age
    b. income
    c. both a and b
    d. none of the above

Answer: B
Page ref: 12-13

6. Which of the following criteria must be met in order to effectively argue that two variables are associated?
    a. The cause must precede the effect.
    b. Changes are not caused by some preceding or intervening variable.
    c. The association must be present "often enough."
    d. All of the above.

Answer: D
Page ref: 13

7. The process of defining what we mean by a concept is called _____.
    a. conceptualization
    b. operationalization
    c. alienation
    d. variability

Answer: A
Page ref: 13-14

8. The process of developing a variable that measures a concept is called _____.
    a. conceptualization
    b. operationalization
    c. alienation
    d. variability

Answer: B
Page ref: 13-14

9. Properly operationalized variables must have attributes that are _____.
    a. mutually exclusive
    b. collectively exhaustive
    c. independent
    d. both a and b

Answer: D
Page ref: 14

10. When the attributes of a variable include every possible response the attributes are said to be _____.
    a. mutually exclusive
    b. conceptualized
    c. collectively exhaustive
    d. dependent

Answer: C
Page ref: 14-15

11. Attributes are _____ when the categories do not overlap.
    a. mutually exclusive
    b. conceptualized
    c. collectively exhaustive
    d. dependent

Answer: A
Page ref: 16

12. Race is measured at the _____ level of measurement.
    a. nominal
    b. ordinal
    c. interval/ratio
    d. organizational

Answer: A
Page ref: 17-19

13. Age at first marriage is measured at the _____ level of measurement.
    a. nominal
    b. ordinal
    c. interval/ratio
    d. organizational

Answer: C
Page ref: 17-19

14. The categories used in the 2006 General Social Survey for the variable *Class* include the following: lower, working, middle, and upper class. Identify the level of measurement for this variable.
    a. nominal
    b. ordinal
    c. interval
    d. ratio

Answer: B
Page ref: 17-19

15. Which of the following is a nominal variable?
    a. years of education
    b. political party affiliation
    c. highest degree earned
    d. age

Answer: B
Page ref: 17-18

16. Pie charts are common ways of presenting data for:
    a. nominal variables
    b. ordinal variables
    c. interval/ratio variables
    d. both a and b

Answer: D
Page ref: 21

17. Bar charts are common ways of presenting data for:
    a. nominal variables
    b. ordinal variables
    c. interval/ratio variables
    d. both a and b

Answer: D
Page ref: 22

18. Which type of chart is used to represent interval/ratio data?
    a. pie charts
    b. bar charts
    c. histograms
    d. both a and b

Answer: C
Page ref: 22

19. Which of the following is most appropriate to present data on years of education?
    a. pie charts
    b. bar charts
    c. histograms
    d. both a and b

Answer: C
Page ref: 22

20. _____ refers to the degree to which a variable measures what we think it is measuring.
    a. Validity
    b. Reliability
    c. Conceptualization
    d. Operationalization

Answer: A
Page ref: 22-23

21. _____ refers to the degree to which a measure yields consistent results.
    a. Validity
    b. Reliability
    c. Conceptualization
    d. Operationalization

Answer: B
Page ref: 22-23

22. The General Social Survey is an example of _____ data.
    a. ecological
    b. organizational
    c. individual
    d. group

Answer: C
Page ref: 25

23. The U.S. Census is an example of _____ data.
    a. ecological
    b. organizational
    c. individual
    d. group

Answer: A
Page ref: 27

True/False:

24. Happiness is the independent variable in the following statement: If income increases then happiness increases.

Answer: False
Page ref: 12-13

25. Conceptualization is the process of defining what we mean by a concept.

Answer: True
Page ref: 13-14

26. Attributes are collectively exhaustive when the attributes do not overlap.

Answer: False
Page ref: 16

27. Ordinal variables have attributes based on relative numeric values.

Answer: False
Page ref: 18

28. Interval/ratio is considered the highest level of measurement.
Answer: True
Page ref: 18-19

29. Pie charts should be used to present data for nominal or ordinal variables.
Answer: True
Page ref: 21

30. Histograms are used to display data for nominal variables.
Answer: False
Page ref: 22

31. Survey questions are not reliable if respondents interpret the questions in different ways.
Answer: True
Page ref: 23, 30

Short Answer:

32. What are statistics, and why are they important?

Answer: Statistics are numeric representations of reality that facilitate our ability to describe, communicate, predict, and act. Statistics are important for a number of reasons. Namely, statistics provides a range of analytical tools that we have to approach and live in the world with which we are confronted. Statistics help us to think critically and reflectively about what others tell us about the world so that we can come to our own, well-informed, conclusions.
Page ref: 10-11

33. The following is an empirical research question: *Does a person's sexual orientation have an effect on annual income?* Consider this research question and answer the following:
    a. State a suitable research hypothesis:
    b. What is the independent variable?
    c. What is the level of measurement for the independent variable?
    d. What is the dependent variable?
    e. What is the level of measurement for the dependent variable?
    f. What is the unit of analysis for the research question?

Answer:
    a. Example: Homosexuals have higher incomes than heterosexuals.
    b. Sexual orientation
    c. Nominal
    d. Income
    e. Interval/ratio
    f. Individual
Page ref: 11-13, 17-19

34. Identify the independent and the dependent variable, as well as the unit of analysis, in the following hypothesis: *Urban residents are more likely than rural residents to be overweight.*
    Dependent variable:
    Independent variable:
    Unit of analysis:
Answer:
    Dependent variable: Weight
    Independent variable: Place of residence
    Unit of analysis: Individual
Page ref: 11-13

35. Suppose a researcher finds an association between age and home ownership. Three conditions must be satisfied in order to argue a causal connection. Name and discuss **two** of these three conditions.

Answer: The three (two asked) conditions are: The cause must precede the effect, changes are not caused by some preceding or intervening variable, and the association must be present "often enough."
Page ref: 13

36. Discuss two factors that must be considered when operationalizing a variable.

Answer: Variables must be collectively exhaustive—attributes include every possible response—and mutually exclusive—each case can be applied to only one attribute of a variable.
Page ref: 14

37. Distinguish between the individualistic and ecological fallacy.

Answer: The individualistic fallacy is a type of error that occurs when the characteristics of an individual are imposed upon all of the members of a group to which that individual belongs, whereas the ecological fallacy results from drawing conclusions about individuals based on characteristics of a group.
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