## Test Bank for Applied Statistics From Bivariate Through Multivariate Techniques 2nd Edition Warner 141299134X 9781412991346

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## **Chapter 1: Review of Basic Concepts**

**Multiple Choice** 

A researcher uses a six-sided dice to determine group membership. The sampling method being used is:
 a. random sample.
 b. stratified sample.
 c. convenience sample.
 d. clustered sample.
 Ans: a

2.The level of measurement has an absolute 0 as a meaningful value is:a. nominalb. ordinalc. intervald. ratioAns: d

3. The level of measurement for a 10-point pain scale where 1 is *no pain* and 10 is *very painful* is:
a. nominal
b. ordinal
c. interval
d. ratio
Ans: c

4.Likert-scaled instruments could be considered all BUT what level of measurement: a.nominal b.ordinal c.interval d.ratio 5.The Gaussian distribution is also known as the \_\_\_\_\_\_ distribution:
a. normal
b. exponential

c. positively-skewed d. platykurtic Ans:a

6. Approximately two-thirds of all values in the standard normal distribution fall within how many standard deviations of the mean:

a.0

b.1

c.2

d.3

Ans:b

7. This element is not typically included in a behavioral experiment:

a. a treatment or intervention

b. assessment of an outcome.

c. random assignment

d. uncontrolled variables

Ans: d

8. The degree to which a study's results can be replicated in *real world* settings is:
a. rival explanation
b. temporal precedence
c. external validity
d. internal validity
Ans: c

9. What type of analysis should be used for a between-S design with more than two levels for the independent variable group:
a. repeated measures analysis of variance
b.one-way analysis of variance
c. independent samples t-test
d. Friedman analysis of variance
Ans: b

Ans:a

10. A researcher has a categorical independent variable and a quantitative dependent variable. Which of the following analyses would <u>not</u> be appropriate:

a. paired-samples t-test

b. one-way between S analysis of variance

c. chi-square test of association

d. Wilcoxon signed-rank test

Ans: c

11. Which analysis would be appropriate when comparing subjects scores on a pretest and a posttest:
a. independent samples t test
b. one-way between S analysis of variance
c. paired-samples t test
d. Wilcoxon rank sum test
Ans: c

12. Assigning individuals to groups based on the study variable of interest is:a. matchingb. random assignmentc. random selectiond. repeated measuresAns: a

13. The degree to which a study supports a causal relationship is:a. criterion validityb. construct validityc. internal validityd. external validityAns: c

14. If an extraneous variable is associated with the independent variable and affects the outcome of the dependent variable, it is considered a:a. temporal precedenceb. nuisance variablec. outcome variabled. confounded variableAns: d

15. Which type of analysis would you use a chi-square test of association:

a. both X and Y are categorical variables.

b. X is categorical and Y is quantitative.

c. X is quantitative and Y is categorical.

d. both X and Y are quantitative variables. Ans: a

## **True/False**

1. All members of a population of interest should be identifiable. Ans: True

2. A researcher surveys freshman college students at her school about beverages available in the dining hall. After analyzing her results, she states, "Twenty percent of college students nationwide prefer non-carbonated beverages." Is the researcher's conclusion accurate? Ans: False

3.Variables with interval- or ratio-level measurements are considered quantitative variables. Ans: True

4. Means and standard deviations can be calculated with Likert-scaled measurements. Ans: True

5. Parametric statistics include the Wilcoxon rank-sum test, the sign test, and the Friedman one-way analysis of variance. Ans: False

## **Short Answer**

1. A sample of 50 participants is separated into two groups. Participants are asked to complete a test on obesity. One group then takes a class about nutrition, exercise, and weight management, while the other group reads pamphlets about weight management. Both groups then repeat the test. Would this be a between-S design or a within-S design? Ans: Between-S design

2. A sample of 50 participants are asked to complete a test on obesity. Participants then read a pamphlet on weight management, and retake the obesity test. Participants then take a class about nutrition,

exercise, and weight management, and take the obesity test. Would this be a between-S design or a within-S design? Ans: Within-S design

3. Is internal validity or external validity stronger in an experimental deisgn? Ans: Internal validity

4. Can the outcome of a nonexperimental study make a statement about causal relationships? Ans: No

5. A nominal categorical variable, school status, is coded as 0 for elementary school and 1 for high school. What parametric analysis could be utilized to report the proportion of students in high school? Ans: The average can be used, as it represents the proportion of students in high school.

Essay

1. Under what conditions can a experiment be considered "internally valid"? Ans: X and Y variables should be associated, if X is the independent variable and Y is the outcome of interest, then X should occur before Y in time; confounding variables should be minimized; and there should be an underlying theory explaining the relationship between X and Y.

2. When should you use nonparametric statistics versus parametric statistics?

Ans: A variety of conditions require the use of nonparametric statistics. These include data which involve frequency, median, nominal, or ordinal measures. Also, they may be used with non-normal distributions and when variances are not equal across groups.