TB_Leary_Chapter 2

Key: Answer, Type, Learning Objective, Level

Type
A=Applied
C=Conceptual
F=Factual
Level
(1)=Easy; (2)=Moderate; (3)=Difficult

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Multiple Choice Single Select

M/C Question 1
Psychologists study behavioral variability
   a) among individuals.
   b) across situations.
   c) over time.
   d) All of these answers are correct
ANS: d

M/C Question 2
Behavioral research should be designed so that
   a) variability in the dependent variable is eliminated.
   b) factors that are related to variability in behavior can be identified.
   c) behavior varies randomly.
   d) participants' behavior does not vary across conditions.
ANS: b

M/C Question 3
When measuring behavior, researchers want the variability in participants' scores on the variable being measured to
   a) be as large as possible.
   b) be unaffected by their manipulation of the independent variable.
   c) correspond to the variability in participants' actual behavior.
   d) be random.
ANS: c

M/C Question 4
Statistics that are used to draw conclusions about the reliability and generalizability of one's findings are called
   a) the range and variance.
   b) descriptive statistics.
   c) effect sizes.
   d) inferential statistics.
ANS: d

M/C Question 5
The variance expresses
   a) the degree to which participants' scores vary from the mean of the scores.
   b) the degree to which the data are skewed.
   c) the range of the scores.
   d) the mean of the scores.
ANS: a

M/C Question 6
What is the range of these scores: 2, 4, 9, 4, 7, 6, 11, 3, 5, 9?
   a) 7
   b) 9
   c) 10
   d) Cannot determine from the information given
ANS: b

M/C Question 7
What is the mean of these scores: 2, 2, 4, 6, 6?
   a) 4
   b) 5
   c) 6
   d) 20
ANS: a

M/C Question 8
Which of the following is the statistical formula for the mean?
   a) $y_i - \bar{y}$
   b) $\sum(y_i - \bar{y})^2$
   c) $\sum y_i / n$
   d) $\sum(y_i - \bar{y})^2 / n-1$
ANS: c

M/C Question 9
If we calculate the deviation scores $(y_i - \bar{y})$ for all of the observations in a set of data and add them, what will the sum be?
   a) The mean
   b) Zero
   c) The sum of squares
   d) 1
ANS: b

M/C Question 10
The total sum of squares is the
   a) sum of the squared deviations of participants' scores from the mean.
   b) standard deviation.
   c) sum of the scores divided by the number of scores.
   d) variance divided by the mean.
ANS: a

M/C Question 11
In statistical notation, s^2 is the symbol for the
    a) sample size.
    b) mean.
    c) variance.
    d) range.
ANS: c

M/C Question 12
Variance in a behavior that is related to variables that an investigator is investigating is
    a) systematic variance.
    b) standard variance.
    c) error variance.
    d) total variance.
ANS: a

M/C Question 13
Variance in a behavior that is not related to the variables that an investigator is investigating is
    a) systematic variance.
    b) standard variance.
    c) error variance.
    d) total variance.
ANS: c

M/C Question 14
In an experiment that examined the effects of room temperature on aggression, systematic variance would be caused by
    a) error variance.
    b) participants' personalities.
    c) aggression.
    d) differences in temperature.
ANS: d

M/C Question 15
In an experiment, which of the following does not contribute to error variance?
    a) The personalities of the participants
    b) The independent variable
    c) The weather
    d) Random equipment malfunctions
ANS: b

M/C Question 16
Error variance
    a) reflects that researchers were not sufficiently careful in designing a study.
    b) equals the sum of the systematic and total variance.
    c) must be eliminated entirely for the results of a study to be valid.
    d) can obscure the effects of the variables of interest to a researcher.
ANS: d

M/C Question 17
When the relationship between two variables is "perfect,"

a) one variable causes the other.
b) the effect size is zero.
c) all of the variability is systematic variance.
d) the hypothesis is confirmed.

ANS: c

M/C Question 18
Which of the following is used to integrate results across a set of individual studies?
a) Meta-analysis
b) Effect size analysis
c) Cumulative analysis
d) Descriptive analysis

ANS: a

M/C Question 19
Effect size indicates
a) the amount of variance in a set of scores.
b) the strength of the relationship between variables.
c) whether one variable causes another.
d) whether an obtained research finding is valid.

ANS: b

M/C Question 20
Compared to the effect sizes found in other sciences, including the biomedical sciences, the effect sizes in psychology are
a) smaller.
b) larger.
c) about the same size.
d) more variable.

ANS: c

Essay

Essay Question 21
In what sense may it be said that psychology is the study of behavioral variability?

Essay Question 22
What does the variance tell us about a set of data?

Essay Question 23
Why is the variance preferred over the range as an index of variability?

Essay Question 24
What is the formula for the variance?

Essay Question 25
What is the total sum of squares?

Essay Question 26
Tell what each of the following statistical symbols represents:
a. $\bar{y}$
b. $\sum(y_i - \bar{y})^2/n - 1$
c. s^2
d. n
e. $\sum$

Essay Question 27
Explain the difference between systematic and error variance.

Essay Question 28
Would researchers like their data to contain more systematic variance or more error variance? Explain.

Essay Question 29
What are some factors that can contribute to error variance?

Essay Question 30
What is a perfect relationship between two variables?

Essay Question 31
What does it mean if one variable accounts for 20% of the variance in another variable? 0%? 100%?

Essay Question 32
Why do researchers conduct a meta-analysis?