

## Chapter 2: Understanding the Research Literature

### Test Bank

#### Multiple Choice

1. The textbook authors often tell their students to think through their research topic before searching the literature. Why do they suggest this?
- A. The students can be disappointed to find that someone has already done exactly the same research.
  - B. The authors feel that the literature is often biased.
  - C. It may be difficult to formulate an original approach after reading the approach taken by others.
  - D. They don't want their students to waste their time in the library when they could be collecting data.

Ans: C

Learning Objective: 2-1: Search the literature using common online databases.

Cognitive Domain: Comprehension

Answer Location: Understanding the Research Literature

Difficulty Level: Medium

2. The most commonly used database to find psychology literature is \_\_\_\_\_.

- A. ERIC
- B. ProQuest
- C. PsycINFO
- D. the library catalogue

Ans: C

Learning Objective: 2-1: Search the literature using common online databases.

Cognitive Domain: Knowledge

Answer Location: Searching the Literature

Difficulty Level: Easy

3. Peer reviewed means that the journal has been \_\_\_\_\_.

- A. read and critiqued by peers who have expertise in the area
- B. reviewed by peers who decide whether the article should be accepted for publication
- C. read and edited for mistakes by the author's peers
- D. reviewed by peers to determine whether the findings are interesting enough that other people would read the article

Ans: A

Learning Objective: 2-1: Search the literature using common online databases.

Cognitive Domain: Comprehension

Answer Location: Searching the Literature

Difficulty Level: Medium

4. Peer-reviewed journals can often be recognized by their common layout. These articles contain an \_\_\_\_\_.

- A. introduction, procedures, results, and conclusion
- B. abstract, literature review, procedures, statistics, and conclusion
- C. abstract, background, variables, outcomes, and discussion
- D. abstract, introduction, methods, results, and discussion

Ans: D

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: The Research Article

Difficulty Level: Medium

5. Gender is an example of a(n) \_\_\_\_\_ variable.

- A. independent
- B. participant
- C. dependent
- D. true independent

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Independent Variable

Difficulty Level: Medium

6. Dependent variable is to independent variable as \_\_\_\_\_ is to \_\_\_\_\_.

- A. cause; effect
- B. hypothesis; results
- C. effect; cause
- D. mediating variable; moderating variable

Ans: C

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Analysis

Answer Location: Dependent Variable

Difficulty Level: Medium

7. William conducted an experiment in which he compared the intelligence of blondes and brunettes. In this example, hair color is a(n) \_\_\_\_\_ variable and intelligence is a(n) \_\_\_\_\_ variable.

- A. participant; dependent
- B. independent; dependent
- C. moderating; independent
- D. independent; participant

Ans: A

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Application

Answer Location: Dependent Variable

Difficulty Level: Hard

8. The textbook mentions a study by Milgram where the presence of two confederates who refused to obey the experimenter significantly altered the outcome of the experiment. This was used as an example of a(n) \_\_\_\_\_.

- A. spurious effect
- B. moderating variable
- C. intervening variable
- D. extraneous variable

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Moderating Variables

Difficulty Level: Medium

9. In the \_\_\_\_\_ section of a research paper, you should find enough details that you could replicate the study on your own.

- A. method
- B. materials
- C. procedure
- D. abstract

Ans: A

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Knowledge

Answer Location: The Method

Difficulty Level: Easy

10. To find out whether the data support the research hypothesis, what section of a paper should you consult?

- A. abstract
- B. results
- C. conclusion
- D. discussion

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Knowledge

Answer Location: The Results

Difficulty Level: Easy

11. Descriptive statistics are to inferential statistics as \_\_\_\_\_ is to \_\_\_\_\_.

- A. summarize; generalize
- B. generalize; summarize
- C. external validity; internal validity
- D. probability; certainty

Ans: A

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Analysis

Answer Location: The Results

Difficulty Level: Medium

12. Catherine got 72% on her algebra test. She was pleased until she heard that half the class got a higher score. Her score is equal to the \_\_\_\_\_.

- A. mean
- B. median
- C. mode
- D. standard deviation

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Application

Answer Location: Descriptive Statistics

Difficulty Level: Hard

13. Zachary's statistics professor gave him his test back without his grade. Instead, the professor had written down the class mean, median, mode, range, and Zachary's score in standard deviations. The mean, median, mode, range, and standard deviation are all examples of \_\_\_\_\_.

- A. measures of central tendency
- B. inferential statistics
- C. nonparametric results
- D. descriptive statistics

Ans: D

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Application

Answer Location: Descriptive Statistics

Difficulty Level: Hard

14. Bob scored 3 standard deviations above the class mean on his statistics test. Assuming the scores were normally distributed, how did Bob score compare to the rest of the class?

- A. Bob's score was very high.
- B. Bob's score was moderately high.
- C. Bob's score was near the average.

D. It is impossible to tell where Bob's score is without more information.

Ans: A

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Application

Answer Location: Descriptive Statistics

Difficulty Level: Hard

15. About \_\_\_\_\_ of the scores in a normal distribution falls between one standard deviation above the mean and one standard deviation below the mean.

A. 95%

B. 67%

C. 50%

D. 33%

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Knowledge

Answer Location: Descriptive Statistics

Difficulty Level: Easy

16. Researchers have found that people who study more tend to achieve better grades than those who study less. This is an example of a \_\_\_\_\_ correlation.

A. negative

B. positive

C. perfect

D. zero

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Descriptive Statistics

Difficulty Level: Medium

17. When carrying out research in psychology, data are often limited. To compensate for this, researchers include a(n) \_\_\_\_\_ to report the results as accurately as possible.

A. interval estimation

B. probability estimate

C. hypothesis test

D. standard deviation

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Inferential Statistics

Difficulty Level: Medium

18. A null hypothesis is used in statistics because \_\_\_\_\_.

- A. statisticians like to make everything more confusing than it really is
- B. it makes it more likely that you will find statistically significant results
- C. it is easier to disprove something than to prove something
- D. it is easier to prove something than to disprove something

Ans: C

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Common Tests of Significance

Difficulty Level: Medium

19. When Suzy does a study to find out if psychology students and biology students differ in intelligence, her results are statistically significant. What does this mean?

- A. Psychology students are smarter than biology students.
- B. Biology students are smarter than psychology students.
- C. Psychology students and biology students do not differ in intelligence.
- D. Psychology students and biology students differ in intelligence.

Ans: D

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Application

Answer Location: Common Tests of Significance

Difficulty Level: Hard

20. With an  $\alpha$  of .01, those wearing earplugs performed statistically significantly better ( $M = 35$ ,  $SD = 1.32$ ) than those who did not ( $M = 27$ ,  $SD = 1.55$ ),  $t(84) = 16.83$ ,  $p = .002$ .

In this statement,  $M$  is a symbol representing the \_\_\_\_\_.

- A. mean
- B. median
- C. mode
- D. medium

Ans: A

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Common Tests of Significance

Difficulty Level: Medium

21. With an  $\alpha$  of .01, those wearing earplugs performed statistically significantly better ( $M = 35$ ,  $SD = 1.32$ ) than those who did not ( $M = 27$ ,  $SD = 1.55$ ),  $t(84) = 16.83$ ,  $p = .002$ . In the statement above,  $p$  is a symbol representing the \_\_\_\_\_.

- A. Pearson correlation
- B. probability estimate
- C. positive correlation

D. *p* test

Ans: B

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Common Tests of Significance

Difficulty Level: Medium

22. An experiment should involve AT LEAST two groups, a(n) \_\_\_\_\_ group and a \_\_\_\_\_ group.

- A. independent; dependent
- B. male; female
- C. experimental; control
- D. regular; trial

Ans: C

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Knowledge

Answer Location: *t* Test

Difficulty Level: Easy

23. When researchers use a *t* test in their analysis, the question they are trying to answer is whether \_\_\_\_\_.

- A. the group is different than what we would expect by chance
- B. the groups are significantly different after receiving the treatment
- C. there is a relationship between the variables
- D. the predictor variable predicts the criterion variable

Ans: B

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: *t* Test

Difficulty Level: Medium

24. When you want to compare two groups, what is the BEST test to use?

- A. Pearson's *r* test
- B. factor analysis
- C. *F* test
- D. *t* test

Ans: D

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: *t* Test

Difficulty Level: Medium

25. An *F* test of significance is used to compare \_\_\_\_\_.

- A. frequencies of two groups
- B. means of two groups
- C. means of more than two groups
- D. the relationship between two variables

Ans: C

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: *F* Test

Difficulty Level: Medium

26. According to the text, a post hoc comparison is used following an *F* test to \_\_\_\_\_.

- A. determine what variables should be analyzed
- B. find out if the observed frequencies differ from those we would expect by chance
- C. determine whether any confounding variables may have affected the results
- D. specify which groups were different from which others

Ans: D

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: *F* Test

Difficulty Level: Medium

27. Nonparametric tests \_\_\_\_\_.

- A. make assumptions that the population is normally distributed
- B. do not make assumptions that the population is normally distributed
- C. include *t* tests and *F* tests
- D. do not include a null hypothesis

Ans: B

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Knowledge

Answer Location: Chi-Square Test

Difficulty Level: Easy

28. In a  $\chi^2$  \_\_\_\_\_, the null hypothesis is that the observed frequencies will not be different from those we would expect by chance. In a  $\chi^2$  \_\_\_\_\_, the null hypothesis is that there is no relationship between the two variables.

- A. goodness-of-fit test; test for independence
- B. test for independence; goodness-of-fit test
- C. frequency count test; test for variability
- D. test for variability; frequency count test

Ans: A

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Analysis

Answer Location: Chi-Square Test

Difficulty Level: Medium

29. Research that involves counting the number of men versus women who run a stop sign would likely report the results of a(n) \_\_\_\_\_.

- A.  $t$  test
- B.  $F$  test
- C.  $r$  test
- D.  $\chi^2$

Ans: D

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Application

Answer Location: Chi-Square Test

Difficulty Level: Hard

30. If a researcher is interested in investigating a linear relationship between two continuous variables, they would use \_\_\_\_\_.

- A. Pearson's  $r$  test
- B. multiple regression
- C. partial correlation
- D. logistic regression

Ans: A

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Knowledge

Answer Location: Pearson's  $r$  Test

Difficulty Level: Easy

31. When researchers use regression in their analysis, the question they are trying to answer is whether \_\_\_\_\_.

- A. the group is different than what we would expect by chance
- B. the groups are significantly different after receiving the treatment
- C. there is a relationship between the variables
- D. the predictor variable predicts the criterion variable

Ans: D

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: Regression

Difficulty Level: Medium

32. You read "Based on a poll of 500 people, 78% say they would vote for Arnold Schwarzenegger if there were an election tomorrow; these results are accurate to within 3% points 19 times out of 20." This author has used \_\_\_\_\_ to report her results.

- A. confidence intervals
- B.  $p$  values
- C. statistical significance
- D. parameters

Ans: A

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Application

Answer Location: Confidence Intervals

Difficulty Level: Hard

33. Multiple regression \_\_\_\_\_.

- A. uses frequency counts to determine whether there is a relationship between the variables
- B. uses more than one dependent variable to predict one outcome variable
- C. is used to determine whether a large number of variables can be explained by a much smaller number of uncorrelated constructs
- D. uses more than one predictor variable to predict one criterion variable

Ans: D

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Comprehension

Answer Location: Multiple Regression

Difficulty Level: Medium

34. Sarah would like to measure the relationship between age and income. She realizes that another variable, years of education, is probably related to both age and income. What analysis should Sarah use to remove the effects of years of education from both variables?

- A. partial correlation
- B. semipartial correlation
- C. multiple regression
- D. factor analysis

Ans: A

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Application

Answer Location: Partial Correlation

Difficulty Level: Hard

35. George was conducting research to determine the correlation between number of hours studying and grades. He wanted to measure this correlation but first wants to account for the variance in grades related to intelligence. Which analysis should George use?

- A. partial correlation
- B. semipartial correlation

- C. multiple regression
- D. factor analysis

Ans: B

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Application

Answer Location: Semipartial Correlation

Difficulty Level: Hard

36. An odds ratio, a prediction of the likelihood of the occurrence of the criterion variable, is used in \_\_\_\_\_.

- A. logistic regression
- B. multiple regression
- C. factor analysis
- D. cluster analysis

Ans: A

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Comprehension

Answer Location: Logistic Regression

Difficulty Level: Medium

37. In \_\_\_\_\_, the idea is to group data into meaningful structures or taxonomies.

- A. logistic regression
- B. multiple regression
- C. factor analysis
- D. cluster analysis

Ans: D

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Knowledge

Answer Location: Cluster Analysis

Difficulty Level: Easy

### True/False

1. PsycINFO is probably the most widely used bibliographic search engine for English-language journals.

Ans: T

Learning Objective: 2-1: Search the literature using common online databases.

Cognitive Domain: Knowledge

Answer Location: Searching the Literature

Difficulty Level: Easy

2. The dependent variable is the variable in an experiment that is manipulated by the researcher.

Ans: F

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Dependent Variable

Difficulty Level: Medium

3. The mean, median, and mode are all measures of central tendency.

Ans: T

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Descriptive Statistics

Difficulty Level: Medium

4. Statistical significance means that it is unlikely that the null hypothesis is true given the data that were collected.

Ans: T

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: Common Tests of Significance

Difficulty Level: Medium

5. ANOVAs are analyzed using the *t* test.

Ans: T

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: *F* Test

Difficulty Level: Medium

6. An interaction occurs when different combinations of the levels of the independent variables have different effects on the dependent variable.

Ans: T

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Knowledge

Answer Location: Objectives of Science

Difficulty Level: Easy

7. The Kruskal–Wallis *H* test is a nonparametric alternative to the one-way ANOVA.

Ans: T

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Knowledge

Answer Location: Other Nonparametric Tests

Difficulty Level: Easy

8. Multiple regression involves one predictor variable.

Ans: F

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Comprehension

Answer Location: Multiple Regression

Difficulty Level: Medium

9. If we want to remove the influence of a variable from only one of the other variables, we conduct a semipartial correlation.

Ans: T

Learning Objective: 2-4: Appraise the complex statistical procedures found in research articles.

Cognitive Domain: Knowledge

Answer Location: Semipartial Correlation

Difficulty Level: Easy

### **Short Answer**

1. List research questions you are interested in and explain how you might go about finding related literature.

Ans: Varies but the responses should describe a literature search process involving a database such as PsycINFO.

Learning Objective: 2-1: Search the literature using common online databases.

Cognitive Domain: Application

Answer Location: Searching the Literature

Difficulty Level: Hard

2. Describe what is meant when someone says that an article is subject to a process of blind peer review.

Ans: Peer review is a process whereby the editor of a journal sends submitted manuscripts out to be reviewed by other researchers in the same field of study. The manuscript is read and critiqued by other researchers in the area. The review is usually blind, meaning that the name(s) of the author(s) of the manuscript is removed from the manuscript before the copies are sent to the peer reviewers. Blind review also means that the editor does not reveal the reviewers' names to the author(s) of the manuscript.

Learning Objective: 2-1: Search the literature using common online databases.

Cognitive Domain: Application

Answer Location: Searching the Literature

Difficulty Level: Hard

3. List and briefly describe each of the five sections of a peer-reviewed journal.

Ans: Abstract--a comprehensive summary of the article describing what was done, to whom, and what was found. Introduction--provides background on the research problem. Method--provides details about exactly how the variables are measured,

manipulated, or controlled, and includes participants/subjects, materials and/or apparatus, and procedure. Results--describes whether or not the data support the research hypothesis, and reports relevant statistics. Discussion--description of how the results fit into the literature.

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Comprehension

Answer Location: The Research Article

Difficulty Level: Medium

4. How are the experimental and control groups treated differently in a study?

Ans: The experimental group receives “treatment” (the IV) and the control group does not.

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Analysis

Answer Location: Dependent Variable

Difficulty Level: Medium

5. What is the difference between moderating variables and mediating variables?

Provide an example of each type of variable (they may be fictional).

Ans: Varies. Moderating variables act to influence the relationship between the independent and dependent variables, whereas mediating variables act as a link between the independent and dependent variables.

Learning Objective: 2-2: Describe what is contained in each section of a typical research article.

Cognitive Domain: Analysis

Answer Location: Mediating Variables

Difficulty Level: Medium

6. Describe two basic tests of significance and what the results in a research paper will tell us about the relationship between the variables.

Ans: Varies depending on the test described. Two examples are *t* test--the results will tell us whether the experimental and control groups performed significantly different; that is, did the treatment work? and  $\chi^2$  goodness-of-fit test--the results will tell us whether the observed frequencies were different than those we would expect by chance.

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: Tests of Significance

Difficulty Level: Medium

7. What is the difference between parametric tests and nonparametric tests? Give two examples of each.

Ans: A parametric test makes the assumption that the population is normally distributed,

whereas a nonparametric test does not assume that the population is normally distributed. Parametric tests—*t* test, *F* test. Nonparametric tests-- $\chi^2$ , Pearson's *r* test, regression, and so on.

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Analysis

Answer Location: Chi-Square Test

Difficulty Level: Medium

8. What are confidence intervals used for?

Ans: Confidence intervals are used when we are interested in estimating population parameters. We use confidence intervals to report an interval within which we estimate the true population parameter to fall.

Learning Objective: 2-3: Calculate the typical descriptive statistics found in research articles.

Cognitive Domain: Comprehension

Answer Location: Confidence Intervals

Difficulty Level: Medium