Chapter 2: Understanding the Research Literature

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) They'll 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.

2. Mary is searching the literature for research on ADHD. She became frustrated because there were 1286 articles on the topic. What should Mary do?
A) She could limit her search to only those articles published in the last 2 years.
B) Start reading really fast.
C) She could add a second term to combine with ADHD.
D) A & B
*E) A & C

3. Gender would be an example of a (an) _____.
A) Independent variable
*B) Participant variable
C) Dependent variable
D) True independent variable
E) None of the above

4. 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) A spurious effect
*B) A moderating variable
C) An intervening variable
D) An extraneous variable

5. Catherine got 72% on her algebra test. She was pleased until she heard that half the class got a higher mark. Her score is equal to the _____.
A) Mean
*B) Median
C) Mode
D) Á la mode

6. Research that involved counting the number of men versus women who run a stop sign

would likely report _____.
A) A t-test
B) An F test
C) An r test
*D) A chi-square
E) None of the above

7. Discussion section _____.
A) Is where the results are discussed
B) Is where you'll find a discussion of how the results fit into theory
C) Is where you may find mention of new directions for future research
D) A & C
*E) All of the above

8. Descriptive statistics are to inferential statistics as _____.
*A) Summarize is to generalize
B) Generalize is to summarize
C) External validity is to internal validity
D) Probability is to certainty

9. Using previous literature when doing your own research is important because it _____.
A) Gives you an idea about the kinds of problems other researchers have had
B) Provides a historical context for your study by describing what has been done and what remains to be explored
C) Helps you determine what kind of statistical analysis you should use for your data
*D) A & B
E) All of the above

10. The most commonly used database to find psychology literature is _____.
A) ERIC
B) Proquest
*C) PsycINFO
D) The library catalogue
E) None of the above

11. Peer reviewed journals can often be recognized by their common layout. These articles contain _____.
A) An introduction, procedures, results, and conclusion
B) An abstract, literature review, procedures, statistics, and conclusion
C) An abstract, background, variables, outcomes, and discussion
*D) An abstract, introduction, methods, results, and discussion

12. 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
E) None of the above

13. PsycINFO allows you to refine your search by _____.
A) Combining terms and using keywords
B) Language and age group
C) Publication type and year of publication
D) A & C
*E) All of the above

14. The abstract of a research article _____.
A) Is a comprehensive summary of the article
B) Is the only part you really need to read
C) Can help you decide whether you would like to read the entire article
*D) A & C
E) All of the above

15. A dependent variable is to independent variable as _____.
A) Cause is to effect.
B) Hypothesis is to results.
*C) Effect is to cause.
D) Mediating variable is to mediating variable.

16. 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

17. In this 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

18. In this subsection of a research paper you can find out what people took part in the study.
A) Subjects
B) Demographic information
*C) Participants
D) A & C

19. 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

20. According to the textbook, what two purposes are statistics used for in research?
*A) To summarize data and to test research hypotheses
B) To describe data and to explain research outcomes
C) To understand data and to calculate research findings
D) To report data and to estimate research effects.

21. Zachary's statistics professor gave him his test back without his mark. 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) Non-parametric results
*D) Descriptive statistics

22. Bob scored 3 standard deviations above the class mean on his statistics test. Assuming the scores were normally distributed, how did Bob score compared 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.

23. About _____ of the scores in a normal distribution fall between one standard deviation above the mean and one standard deviation below the mean.
A) 95%
*B) 67%
C) 50%
D) 33%

24. Researchers have found that people who study more tend to achieve better grades than those who study less. This is known as a _____.
A) Negative correlation
*B) Positive correlation
C) Perfect correlation
D) Zero correlation

25. When carrying out research in psychology, data are often limited. To overcome 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

26. 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
E) None of the above

27. 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.

28. 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
E) None of the above

29. 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
E) None of the above

30. 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), $t(84) = 16.83$, $p = .002$. Effect size is an indication _____.
A) That an effect was likely not due to chance
*B) Of the strength of the effect
C) Of the range of the effect
D) That it is probably a reliable effect
E) None of the above

31. 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

32. When researchers use a t-test in their analysis, the question they are trying to answer is:
A) Is the group different than what we would expect by chance?
*B) Are the groups significantly different after receiving the treatment?
C) Is there a relationship between the variables?
D) Does the predictor variable predict the criterion variable?

33. When researchers use regression in their analysis, the question they are trying to answer is:
A) Is the group different than what we would expect by chance?
B) Are the groups significantly different after receiving the treatment?
C) Is there a relationship between the variables?
*D) Does the predictor variable predict the criterion variable?
E) None of the above

34. When researchers use correlation in their analysis, the question they are trying to answer is:
A) Is the group different than what we would expect by chance?
B) Are the groups significantly different after receiving the treatment?
*C) Is there a relationship between the variables?
D) Does the predictor variable predict the criterion variable?
E) None of the above

35. 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
E) None of the above

36. 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
E) None of the above

37. Quasi-experimental designs _____.
A) Are true experiments
B) Include confounding variables that alter the results
*C) Use participant variables to determine group differences
D) Are like experimental designs but don't include as many participants

38. 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
E) None of the above

39. In a One-Way ANOVA there is one _____, in a Two-Way ANOVA there are two _____, and in a Three-Way ANOVA there are three _____.
*A) Independent variable(s)
B) Group(s)
C) Level(s)
D) Correlation(s)
E) None of the above

40. Sally was conducting an experiment in which she was trying to find out whether women's height (tall or short) and/or hair color (blonde, brunette, or red) was related to the number of dates she went on. When Sally calculated the results using a Two-Way ANOVA, she found an interaction effect. Which of the following results might Sally have found?
A) All women had the same number of dates.
B) Short women had more dates than tall women.
*C) Tall blonde women had the most dates.
D) Brunettes had more dates than blondes, but not red-heads.
E) none of the above

41. Non-parametric 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

42. In a Chi-square _____ the null hypothesis is that the observed frequencies will not be different from those we would expect by chance. In a Chi-square _____ 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

43. If a researcher is interested in investigating a linear relationship between two continuous variables, he or she would use _____.
*A) Pearson's r-test
B) Multiple regression
C) Partial correlation
D) Logistic regression
E) None of the above

44. 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

45. 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) Semi-partial correlation
C) Multiple regression
D) Factor analysis
E) None of the above

46. 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) Semi-partial correlation
C) Multiple regression
D) Factor analysis
E) None of the above

47. 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
E) None of the above

48. _____ can tell us if a large number of variables can be explained by a much smaller number of uncorrelated constructs.
A) Logistic regression
B) Multiple regression
*C) Factor analysis
D) Cluster analysis

49. In _____ the idea is to group data into meaningful structures or taxonomies.
A) Logistic regression
B) Multiple regression
C) Factor analysis
*D) Cluster analysis

50. 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

percentage 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
E) None of the above

True/False

51. PsycINFO is probably the most widely used bibliographic search engine for English-language journals.
*A) True
B) False

52. The dependent variable is the variable in an experiment that is manipulated by the researcher.
A) True
*B) False

53. The mean, median and mode are all measures of central tendency.
*A) True
B) False

54. Statistical significance means that it is unlikely that the null hypothesis is true given the data that were collected.
*A) True
B) False

55. ANOVAs are analyzed using the t-test.
A) True
*B) False

56. An interaction occurs when different combinations of the levels of the independent variables have different effects on the dependent variable.
*A) True
B) False

57. The Kruskal-Wallis H test is a nonparametric alternative to the one-way ANOVA
*A) True
B) False

58. Multiple regressions involve one predictor variable.
A) True
*B) False

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

*A) True
B) False

Short Answer

Type: E
60. List a research question you are interested in and explain how you might go about finding related literature.
*A) Answers will vary.

Type: E
61. Describe what is meant when someone says that an article is peer-reviewed and has been blind.
*A) 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.

Type: E
62. How are the experimental and control group treated differently in a study?
*A) The experimental group receives "treatment" (the IV) and the control group does not.

Type: E
63. List and briefly describe each of the five sections of a peer reviewed journal.
*A) 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. Includes participants/subjects, materials and/or apparatus, and procedure. Results – describes whether or not the data support the research hypothesis. Reports relevant statistics. Discussion – description of how the results fit into the literature.

Type: E
64. What is the difference between moderating variables and mediating variables? Provide an example of each type of variable (they may be fictional).
*A) Moderating variables act to influence the relationship between the independent and dependent variable whereas mediating variables act as a link between the independent and dependent variable. Examples will vary.

Type: E
65. Describe two basic tests of significance and what the results in a research paper will tell us about the relationship between the variables.
*A) Answers will vary depending on the test described. Two examples: t-test – the results will tell us whether the experimental and control group performed significantly different; i.e. did

the treatment work? Chi-square goodness of fit test – the results will tell us whether the observed frequencies were different than those we would expect by chance

Type: E
66. What is the difference between parametric tests and non-parametric tests. Give two examples of each.
*A) A parametric test makes the assumption that the population is normally distributed whereas a non-parametric test does not assume that the population is normally distributed. Parametric tests – t-test, F-test. Non-parametric tests – Chi-square, Pearson's r-test, regression, etc.

Type: E
67. What are confidence intervals used for?
*A) 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.