

1. Describe an example of the role evidence-based practice has had over the last 20 years in the field of health psychology.
2. What is the field of epidemiology, and what are some examples of what epidemiologists study?
3. Explain the relationship between the terms mortality, morbidity, prevalence, and incidence, utilizing clear examples of each term.
4. Describe the techniques that epidemiologists utilize to gather data, and discuss their specific limitations. Clearly identify each of the three major techniques mentioned in the text and include an illustrative example of each one.
5. Use specific health psychology-related examples to illustrate and describe studies that demonstrate the three different types of correlation (positive, negative, perfect) described in the text.
6. Explain and specifically describe the nature and advantages of experimental study designs in health psychology and epidemiological research. In your response, include specific examples that demonstrate your knowledge and understanding.
7. Within the context of health psychology and epidemiological research, give an appropriate example of an experimental study with clearly defined independent and dependent variables. Describe the relationship between the variables to demonstrate your understanding of the difference between the variable types.
8. Outline and describe the events which led to the creation of institutional review boards for scientific research.
9. How might you design an ethical social neuroscience study to investigate the influence of race/ethnicity/culture on health outcome disparities in the United States?
10. Describe some of the challenges that Western-based scientists, epidemiologists, and public health workers face globally today.

## **Answer Key**

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1. Which is NOT a component associated with evidence-based practice?
  - A) Clinical expertise
  - B) Celebrity endorsements
  - C) Understanding of patient's health behaviors, beliefs, and values
  - D) Best available scientific research
  
2. Health psychology is a(n) \_\_\_\_\_-based science because practitioners are trained and knowledgeable about how to provide their patients with reliable data based upon the best available science and information.
  - A) information
  - B) health
  - C) evidence
  - D) population
  
3. Britt, who is trained as a health psychologist, was trained in a program with an emphasis on evidence-based practice. What is Britt MOST likely to do while interacting with patients?
  - A) Treat all patients the same
  - B) Give patients medical care based on personal past experiences
  - C) Utilize untested and experimental therapies
  - D) Give patients medical care based on contemporary evidence
  
4. A set of ideas that explain the world in which we live is a(n):
  - A) concept.
  - B) theory.
  - C) law.
  - D) hypothesis.
  
5. The field concerned with gathering data on health-related issues is:
  - A) epistemology.
  - B) epidemiology.
  - C) ecology.
  - D) entomology.

6. Liselle finds that 60 more new cases of heatstroke occurred at the county fair during the second week of Piefest than occurred during the first week. What is the term which best fits Liselle's findings?
- A) Morbidity
  - B) Incidence
  - C) Relative risk
  - D) Prevalence
7. Mortality is to death as morbidity is to:
- A) trauma.
  - B) disease.
  - C) pathogen.
  - D) risk.
8. Morbidity refers to the:
- A) number of unfavorable health outcomes in a group of people at a given time.
  - B) number of deaths due to a specific cause.
  - C) number of new cases of a disease in a specific population at a given time.
  - D) total number of diagnosed cases of a disease or condition in a given time frame.
9. Incidence refers to the number of:
- A) unfavorable health outcomes in a group of people at a given time.
  - B) deaths due to a specific cause.
  - C) new cases of a disease in a specific population at a given time.
  - D) diagnosed cases of a disease in a given time frame for the whole population.
10. Prevalence refers to the total number of:
- A) unfavorable health outcomes in a group of people at a given time.
  - B) deaths due to a specific cause.
  - C) new cases of a disease in a specific population at a given time.
  - D) diagnosed cases of a disease or condition in a given time frame.
11. Mortality refers to the:
- A) number of unfavorable health outcomes in a group of people at a given time.
  - B) number of deaths due to a specific cause.
  - C) new cases of a disease in a specific population at a given time.
  - D) total number of diagnosed cases of a disease or condition in a given time frame.

12. Dr. Vogler has a theory about the effectiveness of workplace drug and alcohol counseling programs and worker absenteeism rates. He wants to investigate the relationship and so he develops a study and collects data. Specifically, he initially investigates the data based on the stated assumption that "Drug and alcohol counseling workplace program participation has no effect on worker absenteeism rates." Statements like Dr. Vogler's, which can be tested in order to determine whether a theory is supported or not, are known as:
- A) queries.
  - B) investigative proposals.
  - C) hypotheses.
  - D) research questions.
13. Which disease is NOT spread through the transmission of an infectious agent?
- A) Typhoid fever
  - B) Influenza
  - C) Type 2 diabetes
  - D) Smallpox
14. Consumption of 8 ounces of ice cream each day during pregnancy can lead to decreased severity of morning sickness in lactose-tolerant women. This testable statement, based upon the theory that consumption of certain foods may reduce morning sickness severity, is an example of a(n):
- A) hypothesis.
  - B) law.
  - C) concept.
  - D) paradigm.
15. Jerome, who works as an epidemiologist for his county health department, is asked by his supervisor to report the number of individuals in his county who contracted food poisoning during a three-month period. His report is record of:
- A) mortality.
  - B) infection.
  - C) incidence.
  - D) morbidity.
16. The number of deaths of infants under 1 year old per 1,000 live births in a given year is referred to as the infant \_\_\_\_\_ rate.
- A) mortality
  - B) morbidity
  - C) incidence
  - D) prevalence

17. Through research and empirical study, it appears that usage of smokeless tobacco occurs with greater frequency in people with throat cancer than it does in individuals who do not have throat cancer diagnoses. The use of smokeless tobacco can be categorized as a:
- A) pathogen.
  - B) virus.
  - C) risk factor.
  - D) liability.
18. What is the difference between incidence and prevalence?
- A) Incidence is the number of new cases and prevalence is the number of total cases.
  - B) Prevalence is the number of new cases and incidence is the number of total cases.
  - C) Incidence is the number of deaths and prevalence is the number of new cases.
  - D) Prevalence is the number of deaths and incidence is the number of new cases.
19. Kara is conducting a study on the experience of caregivers in hospice care and how their interactions with patients and families impact their own emotional state. Kara's study explicitly makes use of open-ended questions, interviews, and journal entries which describe the individuals' experiences, including particular episodes that are seen as relevant and important to the caregivers in their work and interactions with patients and families. What type of study is Kara conducting?
- A) Descriptive
  - B) Quantitative
  - C) Qualitative
  - D) Surveillance
20. Dr. Moore is interested in pedestrian safety and sets out with her team to a pedestrian crosswalk near campus at the same time on three consecutive days. Dr. Moore records the number of pedestrians who stop, look both ways before crossing the street, and acknowledge oncoming and passing traffic. Dr. Moore does not directly interact or interfere with any of the pedestrians and merely records what she sees. This type of study is best categorized as:
- A) experimental research.
  - B) quasi-experimental research.
  - C) descriptive research.
  - D) longitudinal research.

21. As chief epidemiologist for the state health board, you are asked to provide information to the public regarding the risk of contracting chicken pox after a recent outbreak in a neighboring state. Which report would be the most appropriate summary of the requested information?
- A) A morbidity report
  - B) A mortality report
  - C) An incidence report
  - D) A prevalence report
22. Which data gathering method is properly paired with its description?
- A) Surveillance; basic and superficial information about health and disease
  - B) Descriptive; provide information about attitudes and behaviors
  - C) Analytic; application of observational analysis to study disease
  - D) Qualitative; significant manipulation of factors in a controlled environment
23. What is NOT a stated goal of analytic studies as mentioned in the text?
- A) Testing hypotheses
  - B) Describing characteristics of a disease
  - C) Looking for linkages between possible disease causes
  - D) Determining the frequency of disease
24. A health psychologist who wishes to study the health outcomes of shift work decides to interview assembly line workers as they finish their shifts. In this example, the psychologist is conducting a(n) \_\_\_\_\_ study in the \_\_\_\_\_.
- A) epidemiological; field
  - B) experimental; laboratory
  - C) descriptive; field
  - D) observational; laboratory
25. Which is a qualitative variable?
- A) Male
  - B) Height in inches
  - C) Number of mid-digital hairs
  - D) Description of relationship with your siblings

26. Researchers who conduct quantitative research often know ahead of time what ideas they are testing. In this way, quantitative research is almost always \_\_\_\_\_-driven.
- A) data
  - B) hypothesis
  - C) concept
  - D) inquiry
27. Based upon the information provided in the text and the literature, which question would be most likely to be utilized in a quantitative study of smoking behavior?
- A) Why did you first begin smoking?
  - B) On an average day, approximately how many cigarettes do you smoke?
  - C) When you smoke, what emotions do you experience most often and intensely?
  - D) Can you describe a situation when you are most likely to smoke?
28. Another name for independent variables is \_\_\_\_\_ variables.
- A) predictor
  - B) outcome
  - C) manipulation
  - D) hypothetical
29. The student health center and the Psychology department are working together to conduct a study on the influence of light therapy on emotional well-being. The selected student participants are exposed to simulated natural light for differing time intervals during the winter term. At the beginning and end of each month, each participant is given a measure of emotional well-being to complete. At the end of the study all the data is compiled and analyzed. In this example, emotional well-being is the \_\_\_\_\_ variable.
- A) predictor
  - B) outcome
  - C) manipulation
  - D) hypothetical
30. A variable that the researcher manipulates in order to observe changes in an outcome is known as the:
- A) dependent variable.
  - B) control variable.
  - C) independent variable.
  - D) predictor variable.



31. Christian, who is the primary investigator on a study on height and intelligence, has a scatterplot of data that shows a grouping where the points are fairly distant from a straight line but do demonstrate that as one variable increases, the other decreases in a predictable pattern. Which correlation coefficient would be the most likely to represent the described relationship?
- A) 0.53
  - B) -0.60
  - C) 0.15
  - D) -0.23
32. A researcher wants to investigate the impact of teaching style on three classes of students (one with high IQ, one with low IQ, and one with average IQ). In this example, IQ is the:
- A) dependent variable.
  - B) subject variable.
  - C) independent variable.
  - D) confounding variable.
33. The strength of a correlation coefficient is indicated by \_\_\_\_\_, and the direction of a correlation is indicated by \_\_\_\_\_.
- A) the absolute value of  $r$ ; whether  $r$  is positive or negative
  - B) the sign (positive or negative) of  $r$ ; the absolute value of  $r$
  - C) the slope of a scatterplot; the spread of the data points in a scatterplot
  - D) the number of participants on which the correlation is based; the value of  $r$
34. Macy finds a correlation coefficient of 0.85 with a high p-value. This indicates:
- A) a strong positive correlation that is not statistically significant.
  - B) a strong negative correlation that is statistically significant.
  - C) a strong positive correlation that is statistically significant.
  - D) a strong negative correlation that is not statistically significant.
35. Which correlation coefficient indicates the strongest correlation?
- A) 0.981
  - B) -0.973
  - C) 0.974
  - D) -0.982

36. Researchers have found that as the number of cigarettes smoked increases, the risk of developing lung cancer also increases in a predictable and systematic fashion. This relationship is an example of a:
- A) positive correlation.
  - B) negative correlation.
  - C) statistically significant correlation.
  - D) causal relationship.
37. Lamar is the school nurse for the local school district. He collected data on the relationship between the average temperature of class rooms in local elementary schools and the number of children who asked the teacher for drinks of water. He found a correlation of 0.85 and a p-value of 0.03. The relationship between these two variables is an example of a statistically:
- A) significant positive correlation.
  - B) non-significant negative correlation.
  - C) significant negative correlation.
  - D) non-significant positive correlation.
38. Dr. McCartney is collaborating with the coach of the basketball team in an attempt to find an optimal workout and training schedule. The three training sessions available to analyze were 5:00 am, 7:00 am, and 1:30 pm. After seven weeks of training and game performance analysis in concert with the coach, Dr. McCartney found that, holding all other variables constant, when a student-athlete attended the 5:00 am training session, their athletic performance improved by 10% over their previous performance. The relationship between these two variables is an example of a:
- A) positive correlation.
  - B) negative correlation.
  - C) statistically significant correlation.
  - D) causal relationship.
39. If health psychologists conducted research and the findings revealed that shorter individuals had lower basal body temperatures than taller people, this would demonstrate that:
- A) being short causes lower basal body temperature.
  - B) height and basal body temperature are negatively correlated.
  - C) basal body temperature is inherited.
  - D) height and basal body temperature are positively correlated.

40. If health psychologists conducted research and the findings revealed that the lower the number of cigarettes people smoked per week, the longer their life expectancy, this would demonstrate that:
- A) smoking causes longer life.
  - B) smoking and life expectancy are negatively correlated.
  - C) smoking is environmentally influenced.
  - D) smoking and life expectancy are positively correlated.
41. In a study of the effects of alcohol consumption on respiration rate, alcohol would be the \_\_\_\_\_ variable.
- A) experimental
  - B) dependent
  - C) correlational
  - D) independent
42. Karen is investigating the influence of hours spent meditating on college student grades. She has some students meditate for 3 hours a week, some for 6 hours a week, and some meditate for 9 hours per week. At the end she finds that the more hours a student meditates, the greater the positive influence on grades. What type of variable is hours of meditation?
- A) Dependent
  - B) Independent
  - C) Predictor
  - D) Outcome
43. Barron is investigating the influence of hours of sleep on healthy snacking habits. He has some students sleep for 4 hours a night, some for 6 hours a night, and some for 9 hours per night. At the end he finds that the more hours a student sleeps, the more healthy snacks the individual consumes. Which statement is correct?
- A) There appears to be a negative correlation between sleep and healthy snack consumption.
  - B) Longer sleep causes individuals to consume more healthy snacks.
  - C) There is no relationship between hours of sleep and healthy snack consumption.
  - D) There appears to be a positive correlation between sleep and healthy snack consumption.

44. In a graphic depiction (scatterplot) representing a perfect correlation, the data points for the variables would fall:
- A) exactly along a downward slope forming a line from the upper left part of the graph to the lower right.
  - B) loosely along an upward slope forming a line from the lower left to the upper right.
  - C) exactly along a horizontal straight line.
  - D) loosely along a straight vertical line.
45. Which correlation between height and blood pressure would enable you to most accurately predict a person's blood pressure from his or her height?
- A)  $r = +0.67$
  - B)  $r = -0.81$
  - C)  $r = +0.53$
  - D)  $r = -0.21$
46. Kent believes that high doses of vitamin C speed up a person's reaction time. In order to test his hypothesis, he has ten friends each drink five 8-ounce cups of orange juice and then measures how quickly they are able to push a button when a tone is sounded. What is wrong with Kent's research strategy?
- A) No independent variable has been specified.
  - B) No dependent variable has been specified.
  - C) There is no control condition.
  - D) There is no provision for repeating the experiment.
47. Jessa believes that high levels of social media engagement are bad for sleep quality. In order to test her hypothesis, she has five friends use social media for 6 hours per day for a week, another five friends use social media for 8 hours per day for a week, another five friends use social media for 10 hours per day for a week, and another five friends use their social media as they normally would. What is wrong with Jessa's research strategy?
- A) No independent variable has been specified or measured.
  - B) No dependent variable has been specified or measured.
  - C) There is no control condition.
  - D) There is no provision for repeating the experiment.

48. Mai believes that higher levels of exercise increase academic performance and grades. In order to test her hypothesis, she gathers the grades of 30 of her friends from three different majors, with 10 friends in each major group. What is wrong with Mai's research strategy?
- A) No independent variable has been measured.
  - B) No dependent variable has been measured.
  - C) There is unequal distribution of the sample.
  - D) There is no provision for repeating the experiment.
49. A research design in which there is direct researcher manipulation of the independent variable and assignment to treatment is a(n):
- A) cross-sectional design.
  - B) quasi-experimental design.
  - C) experimental design.
  - D) longitudinal design.
50. A study in which the participants are unaware of the test or procedure being conducted or their assignment to an experimental or control condition is known as a \_\_\_\_\_ study.
- A) cross-cultural
  - B) blind
  - C) double-blind
  - D) placebo
51. When a health psychologist studies variables that cannot be experimentally manipulated, they are said to be conducting a:
- A) randomized clinical trial.
  - B) quasi-experiment.
  - C) community field trial.
  - D) laboratory experiment.
52. A study that compares two groups of participants that differ on the specific variable under study at the outset of the study is called a:
- A) longitudinal study.
  - B) cross-sectional study.
  - C) retrospective study.
  - D) quasi-experiment.

53. A study in which there is non-random assignment to testing conditions or groups, and in which the researcher does not actively and purposefully manipulate the independent variable in hopes of influencing change in the dependent variable, is known as:
- A) experimental research.
  - B) quasi-experimental research.
  - C) observational research.
  - D) longitudinal research.
54. Dr. Grandin is conducting a study on heart rate elevation in participants who are heckled by a stranger while giving a speech on a controversial topic. Dr. Grandin randomly assigns participants to one of three presentation groups that vary on the number of times the heckler interrupts the speaker during the 4-minute speech. This study is best categorized as:
- A) experimental research.
  - B) quasi-experimental research.
  - C) observational research.
  - D) longitudinal research.
55. Dr. Nozick was approached by a researcher to test a new medical treatment for dry mouth. The researcher stipulates that each day he will provide the patients with the oral solution, and that Dr. Nozick is responsible for recording the vial given to the patients and for the follow-up call 2 days later. Neither the patient nor Dr. Nozick will know whether the patient is receiving the current best treatment or the experimental treatment. This type of study is known as a \_\_\_\_\_ study.
- A) observational
  - B) blind
  - C) placebo
  - D) double-blind
56. Dr. Correl is conducting a study on novice vs. master gamer communication in a cooperative team task game. Dr. Correl asks participants how many hours per week they spend playing video games of any sort and then, based upon their responses, assigns participants to one of the two teams. This study is best categorized as:
- A) experimental research.
  - B) quasi-experimental research.
  - C) observational research.
  - D) longitudinal research.

57. To study the effects of bystander training effectiveness and willingness to act, a group of research participants were exposed to one of three conditions: a simulated verbal bullying situation, a simulated harassment situation, and a simulated non-threatening civil interaction. Those who were exposed to the simulated harassment or verbal bullying situations were assigned to the \_\_\_\_\_ group.
- A) control
  - B) placebo
  - C) experimental
  - D) correlational
58. Professor Lemonjello believes that regular nap-taking boosts academic achievement. To find out, over the course of six months she compares the academic achievement of a group of students who, by their own admission, take few or no naps with that of a second group of students who nap regularly. This is an example of a(n):
- A) double-blind study.
  - B) expectancy study.
  - C) quasi-experiment.
  - D) clinical trial.
59. To study the effects of social media isolation on blood pressure, some research participants were instructed to not use social media for a period of one week; others were told to use social media at the same levels at which they typically would. Those who maintained their normal usage levels were assigned to the \_\_\_\_\_ group.
- A) control
  - B) placebo
  - C) experimental
  - D) correlational
60. A detailed plan of a study which specifies the experimental, data collection, and sampling methods is known as a(n):
- A) research manifest.
  - B) experimental protocol.
  - C) manuscript of purpose.
  - D) project proposal.
61. Cross-sectional studies:
- A) follow healthy individuals over a long period of time.
  - B) follow participants with a disease over a long period of time.
  - C) compare participants of similar age groups at different time points.
  - D) compare participants of several different age groups at the same time.

62. In some epidemiological studies, the researcher may attempt to influence action or encourage changes in behavior by framing the message positively or negatively in terms of:
- A) gain or loss.
  - B) threat or harm.
  - C) benefit or advantage.
  - D) good or evil.
63. Dr. Michael wants to study health information-seeking behavior and its relationship with racial identity in second-generation black, white, and Asian young adults. He hopes to elucidate how intergroup differences influence health information-seeking behavior among the studied populations. What type of study is Dr. Michael conducting?
- A) Longitudinal
  - B) Cross-cultural
  - C) Clinical trial
  - D) Developmental
64. Which category could NOT be used to stratify cross-sectional studies?
- A) Different ages
  - B) Different cultures
  - C) Different gender identities
  - D) Different times of day
65. Dr. Howard is interested in the student experience with the student health center, with specific focus on the availability and procurement of the flu vaccine in the wake of a CDC report that this year is going to be a very severe flu season. Dr. Howard is only interested in students from the current student population and their opinions as they relate to this current year. Dr. Howard plans to interview 50 members of each class about their experience. This type of study is best categorized as \_\_\_\_\_ research.
- A) cross-sectional
  - B) experimental
  - C) observational
  - D) longitudinal
66. Influences due to the impact of shared experiences or lifestyles among a group of people who were born and raised at the same time or in the same area are called \_\_\_\_\_ effects.
- A) cross-sectional
  - B) cohort
  - C) retrospective
  - D) confounding



67. Longitudinal epidemiological studies that begin with people who are disease-free and who are then followed for a period of years are called:
- A) retrospective.
  - B) prospective.
  - C) correlational.
  - D) cross-sectional.
68. Dr. Klein, a researcher on gerontological mental health, is interested in conducting a longitudinal study in which she collects data from a group of individuals who are chosen and examined based upon their current health status. She plans to use their previous records and information to create an antecedent history of how their current mental health status was achieved. This type of study is known as a \_\_\_\_\_ study.
- A) developmental
  - B) retrospective
  - C) prospective
  - D) cohort
69. Which epidemiological method is essentially the same as a longitudinal study?
- A) Retrospective study
  - B) Prospective study
  - C) Randomized clinical trial
  - D) Meta-analysis
70. Which statement regarding the Tuskegee Experiment is NOT true?
- A) Participants included poor white and African-American sharecroppers in Alabama.
  - B) Participants were given free food and medical exams by the U.S. government for the treatment of "bad blood."
  - C) After a treatment for syphilis was discovered, it was denied to all participants of the experiment.
  - D) More than 100 participants died of syphilis or disease-related complications before the experiment was officially terminated.
71. The acronym IRB stands for:
- A) International Research Benefits.
  - B) Institutional Review Board.
  - C) Internal Revenue Board.
  - D) Institutional Research Board.

72. The 10-point directive which serves as the foundation for the ethical treatment of human study participants is known the:
- A) Helsinki Code.
  - B) Tuskegee Code.
  - C) Nuremberg Code.
  - D) Belmont Code.
73. In 2015, at State University, the Institutional Review Board began to review its protocols and active studies. During the review, Dr. Mendez, who does biomedical research with animals, received a memo from the Institutional Animal Care and Use Committee indicating that they had received a warning from the National Institutes of Health that some types of biomedical research with animals would no longer be supported with funding. Based upon the information provided, it is most likely that Dr. Mendez and the University received this memo because the research utilized which animal?
- A) Dogs
  - B) Rats
  - C) Rabbits
  - D) Chimpanzees
74. Which was cited as a shortcoming of the Nuremberg Code after it was accepted and ratified by the United States following World War II?
- A) It only protected certain populations.
  - B) It lacked the force of law.
  - C) Informed consent was not included as a central tenet.
  - D) It allowed unqualified researchers to conduct research unchecked.
75. The 46 chromosomes in 23 pairs which we inherit from our parents, and which make up our genetic inheritance, are collectively known as the:
- A) human genome.
  - B) chromosomal complex.
  - C) DNA markers.
  - D) phenotypic karyotype.

## Answer Key

1. B
2. C
3. D
4. B
5. B
6. B
7. B
8. A
9. C
10. D
11. B
12. C
13. C
14. A
15. D
16. A
17. C
18. A
19. C
20. C
21. A
22. B
23. B
24. C
25. D
26. B
27. B
28. A
29. B
30. C
31. D
32. C
33. A
34. A
35. D
36. A
37. A
38. D
39. D
40. B
41. D
42. B
43. D
44. A

- 45. B
- 46. C
- 47. B
- 48. A
- 49. C
- 50. B
- 51. B
- 52. D
- 53. B
- 54. A
- 55. D
- 56. B
- 57. C
- 58. C
- 59. A
- 60. B
- 61. D
- 62. A
- 63. B
- 64. D
- 65. A
- 66. B
- 67. B
- 68. B
- 69. B
- 70. A
- 71. B
- 72. C
- 73. D
- 74. B
- 75. A