NBCC NCE - Quiz Questions with Answers

1. Professional Practice and Ethics

1.

All the following describe qualitative research, **except**:

Researchers examine for causes and relationships

Assumes that there are multiple realities

Studies individual units in naturalistic settings

Researchers may use their impressions, judgments, and feelings

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Correct answer: Researchers examine for causes and relationships

Qualitative and quantitative research are two different kinds of research, though both have advantages.

Qualitative research:

- *Tends to study individual units in naturally occurring settings*
- *Collects research data through observation*
- *Often uses researchers' judgments and impressions*
- *Assumes that there are many different realities held by individuals and groups*
- *Has the goal of describing the nature of things*

In quantitative research, researchers tend to examine for causes and relationships and present much more objective data.

2.

Sometimes certain characteristics of study subjects elicit preferential feelings and responses from researchers, altering results. This is known as:

experimenter bias

attrition

instrumentation error

statistical regression

Correct answer: experimenter bias

Internal validity refers to the degree to which external influences have been controlled. Experimenter bias is one threat to internal validity and refers to times when subjects' responses are influenced by researchers for a variety of reasons. Researchers may expect to see certain results and therefore unintentionally elicit these results, for example, or treat some subjects differently.

3.

There is a general rule that a certain percentage of the population is adequate when determining sample sizes for studies. What is this percentage?

Five to ten percent

Ten to 20 percent

25 to 35 percent

20 to 25 percent

Correct answer: Five to ten percent

Choosing the correct sample size is important, as it can influence statistical hypothesis testing. There are suggested minimal sampling sizes depending on the kind of research conducted. The general rule followed by most researchers is that five to ten percent of the population selected for a sample is large enough to result in accurate results.

4.

Choosing a Vocation was published in 1909 and was written by:

- **Frank Parsons**
- Clifford Beers
- Jesse Davis
- Sigmund Freud

Correct answer: Frank Parsons

Frank Parsons was a university professor in the late 19th and early 20th century who was an advocate for the career guidance movement and wrote several books about the importance of vocational counseling. In 1909, Parsons' most well-known book, Choosing a Vocation, was published posthumously and outlined the trait-factor theory of career development.

5.

There is frequently variability within a distribution of scores. Which of the following is used to describe this variability?

Standard deviation

Variance

Range

Stanine

Correct answer: Standard deviation

Standard Deviation (SD) is a measure of variability and describes the variability within a distribution of scores. It is the mean of all the deviations from the mean, and is a popular measure of the dispersion of scores.

6.

With what kind of measurement might a researcher use a nonparametric statistic such as a chi-square?

Nominal

Ordinal

Interval

Ratio

Correct answer: Nominal

There are four levels of measurement: nominal, ordinal, interval, and ratio. Nominal data refers to numbers that represent categories or qualities of the variable, such as race, gender, and age. Nonparametric statistical measures, which are often used with descriptive data, should be used with nominal data.

7.

In what type of qualitative research is observer bias particularly important?

Ethnography

Case study

Historical analysis

Legal analysis

Correct answer: Ethnography

The purpose of qualitative research is to gather information about naturally occurring events and individuals' and groups' experiences. This is in contrast to quantitative research, which gathers finite data based on structured research designs. Qualitative research can be interactive, consisting of observation and/or interviewing, or noninteractive, occurring through document analysis.

Ethnography is a type of interactive research in which the researcher collects data through interviews and observations about a group or system. It is important for researchers to be particularly sensitive about the impact of observer bias in an ethnography, as bias can affect the observer's interactions with and responses to the individuals they are observing or contacting.

8.

A researcher interviewed individuals with newborns and then re-interviewed them 18 years later. What type of study is this?

Longitudinal

Cross-sectional

Single-subject design

Case study

Correct answer: Longitudinal

Many types of specialized research designs and types can be used, depending on the purpose of the research and any constraints or barriers that might exist. Longitudinal research is useful in collecting data on the same group of participants over a long period of time. While longitudinal data obviously takes longer to compile than information obtained through other types of research, it can be helpful when trying to understand the impact of interventions on individuals over a long period of time.

9.

What is the goal of an inferential approach to statistical analysis?

To determine the probability of a certain event occurring

To describe the data collected for a research sample

To summarize conclusions of a study

To present data that is nonparametric

Correct answer: To determine the probability of a certain event occurring

Statistical analysis can be descriptive or inferential. Inferential statistics, such as analysis of variance and the t-test, measure the probability of an event occurring in the population. Descriptive statistics aim to describe the data that is collected and include means, percentages, and standard deviations.

10.

What is **not** a time when you would use a nonparametric test?

When you are working with ratio scale data levels of measurement

When the scores are abnormally distributed

When the variance of the sample is different from the variance of the population

When scores do not fall along a normal curve

Correct answer: When you are working with ratio scale data levels of measurement

Researchers must use nonparametric statistics when it is uncertain whether the distribution of scores falls along a normal curve or whether the variance of the test sample represents the variance within the general population. Nonparametric statistics are typically used with nominal data, when numbers represent a variable's qualities, and ordinal data, when categories have a definitive order. Examples of nonparametric statistical measures are the chi-square, Mann-Whitney U test, the Wilcoxen signed-rank test, and the Kruskal-Wallis test.

11.

All of the following are true regarding CACREP, **except**:

It was established in 2010

The ACA is focusing on CACREP as a unifying force

Academic institutions are moving to require CACREP program graduation for admission

It exerts a considerable amount of influence over the counseling profession

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Correct answer: It was established in 2010

CACREP (Council for the Accreditation of Counseling and Related Educational Programs) is the national counselor accreditation agency and significantly influences the roles and values of counselor education programs. CACREP was established in 1981 (not 2010). The American Counseling Association has recently been focusing on CACREP as a unifying force to unify the profession of counseling as a whole. Academic programs, licensing boards, and employers are moving to require that potential professional counselors graduate from a CACREP program.

12.

Chi-square and Mann-Whitney U Test are examples of what type of statistics?

Nonparametric

Inferential

Parametric

Descriptive

Correct answer: Nonparametric

Researchers may use parametric or nonparametric statistical measures, depending on the distribution of scores. Nonparametric statistics, such as chi-square and the Mann-Whitney U test, are used when data is not normally distributed and variances are inconsistent. Parametric statistics, such as the t-test and analysis of variance, can be used when samples are randomly drawn from the population and results are distributed along a normal curve.

13.

Factorial analysis of variance measures:

the effects of two or more independent variables on one dependent variable

the effects of one variable at three or more levels

the effects of two or more independent variables on more than one dependent variable

the effect of one or more independent variables on a controlled dependent variable

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Correct answer: the effects of two or more independent variables on one dependent variable

Factorial ANOVA is used to find whether significant differences between two variables exist. One-way Analysis of Variance (ANOVA) can be used to determine differences between three different forms of one variable, such as levels of income. Multivariate analysis of variance (MANOVA) is the statistic used when there is more than one dependent variable involved in the analysis. Analysis of Covariance (ANCOVA) is used to determine covariance when an independent variable and its impact on dependent variables is controlled.

14.

All of the following statements are true regarding standardized scores **except** which one?

They are an expression of a person's distance from the median in terms of distribution

They are conversions of raw score distributions

They allow for scores between individuals to be compared

They are continuous and have equality of units

Correct answer: They are an expression of a person's distance from the median in terms of distribution

Standardized scores are helpful when comparing several different test scores for the same person, as direct comparisons between different tests are impossible. Standardizing scores allows for continuity and an equality of units. The two most common standardized scores are z-scores and T-scores, both of which are conversions of raw score distributions. Standardized scores express the person's distance from the mean, not the median, in terms of the standard deviation from that standard score distribution.

15.

Each state has different licensure laws for counselors. Due to this fragmentation, what is one current threat to counselors' licensure?

The scope of counselors' practice may become increasingly narrow

Some states may give excessive leniency to counselors in regard to administering psychological tests

There is a high possibility that licenses can be revoked for minor ethical infractions

Unless a counselor is certified, he or she cannot practice in more than one state at the same time

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Correct answer: The scope of counselors' practice may become increasingly narrow

There are several threats to licensure for counselors. Because state laws regarding licensure vary widely and are frequently modified, the scope of practice for counselors may become increasingly narrow. Additionally, some states' laws imply that counselors are not permitted to use psychological tests in practice.

16.

A graduate student earning his counseling degree wants to conduct a research study examining the relationship between educational level and substance abuse. What type of research would be **most** helpful in this situation?

Non-experimental correlational design

Quasi-experimental design

Experimental comparative design

Non-experimental survey design

Correct answer: Non-experimental correlational design

There are many types of quantitative research that can provide tentative explanations for relationships between factors. A non-experimental correlational design uses a correlation coefficient to describe the relationship between variables. The student in this question could gather information about individuals' current substance use and level of education, then calculate the relationship between the two without using any type of experimental design.

17.

Which of the following is an example of a unit that might be used in cluster sampling?

All residents living in one city block

All female students enrolled in a statewide university system

Children whose parents have divorced in the past 10 years

Because 25% of the population in a city is Hispanic, 25% of the study subjects are Hispanic as well

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Correct answer: All residents living in one city block

There are many types of sampling, which refers to the selection of subjects from a part of the population. Cluster sampling refers to samples that are not individuals but are units of individuals in the same physical area that are selected randomly. Examples of cluster samples include residents in a city block or students in a classroom.

18.

What is an example of nominal data?

An individual's race

A student's numerical score on an exam

The Fahrenheit temperature scale

The percentage of individuals who live in rural versus urban areas

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Correct answer: An individual's race

There are four levels of measurement: nominal, ordinal, interval, and ratio. Nominal data refers to numbers that represent categories or qualities of the variable, such as race, gender, and age. Nonparametric statistical measures, which are often used with descriptive data, should be used with nominal data.

19.

A counselor working at a college regularly provides group therapy for students. The counselor is curious to know whether a particular curriculum produces improved social skills for students with high-functioning autism. The counselor explains to group participants that she is collecting data on their scores through self-evaluations completed by them. After the final data is collected, the counselor sees that participants' scores on the self-evaluations improved drastically over the course of the intervention. However, the counselor is concerned that the scores were heavily influenced by participants' knowledge that the counselor was conducting research. This counselor is appropriately concerned about what threat to external validity?

Hawthorne effect

Placebo effect

Experimenter bias

Attrition

Correct answer: Hawthorne effect

External validity is the degree to which study results can be applied to populations outside of the study. There are many threats to external validity, including the Hawthorne effect (which is also a threat to internal validity). This is the influence on performance that can occur when subjects know they are being observed, and it can greatly affect their responses. Researchers should pay attention to the reactivity of subjects to determine how greatly results are being affected.

20.

In most research studies, who should have access to the data?

The researchers and research assistants only

All of the study participants

The general public

Members of the IRB that approved the study

Correct answer: The researchers and research assistants only

Much like in counseling practice, issues of confidentiality arise in research as well. Only researchers and research assistants gathering data should have access to information obtained on subjects during the study. Information gathered during studies should only be released to others with the written consent of the subjects.

21.

After data is collected and plotted, a researcher notices that the distribution of scores in a study has much more variability at the beginning than at the end. This is known as:

heteroscedasticity

inter-rater reliability

rank-order correlation

homoscedasticity

Correct answer: heteroscedasticity

There are numerous ways the distribution of scores can fall along a graph. Heteroscedasticity refers to times when, for many different reasons, one end of a distribution of scores has more variability than the other end, resulting in a fan-like appearance. Homoscedasticity, on the other hand, refers to times when scores are equally distributed throughout the range.

22.

Which of the following is a possible threat to external validity, but not to internal validity?

Ecological validity

Selection of subjects

Experimenter bias

Placebo effect

Correct answer: Ecological validity

External validity refers to the degree to which study results can be applied to populations outside the study. Ecological validity refers to whether the study can be generalized to another setting; sometimes the environment, location, or condition of research studies is so unique that it is impossible to replicate results to a more real-world setting.

23.

The square of the standard deviation is also known as:

variance

inclusive range

normal curve

z-score

Correct answer: variance

Variance refers to the degree to which scores are different from each other. When measuring variability, researchers may use Standard Deviation (SD) to describe the variability within a distribution of scores. Variance is the square of the standard deviation and is used when conducting statistical analyses.

24.

A researcher in a college setting knows that 55% of the student body is female and 45% is male. For his study on the effects of caffeine on students' study habits, he randomly selects the sample to be 55% female and 45% male. This researcher is using what type of sampling?

Proportional stratified sampling

Cluster sampling

Stratified sampling

Purposeful sampling

Correct answer: Proportional stratified sampling

There are many types of sampling, which refers to the selection of subjects from a part of the population. Proportional stratified sampling is when the proportion of subjects randomly sampled from a certain group reflects the proportion of the group in the general population. In this question, because 55% of the student body is female and the remainder male, the researcher randomly selects 55% of the sample to be female and the remainder male.

25.

A researcher develops a list of questions to assess the relationship between religious beliefs and child-rearing styles. She randomly divides the list of questions into two sets and finds that the results have a high correlation. This questionnaire has a high degree of which of the following?

Split-half reliability

Inter-rater reliability

Parallel-forms reliability

Test-retest reliability

Correct answer: Split-half reliability

Split-half reliability is calculated by randomly splitting a list of questions into sets, then finding the correlation between the two. If there is a high correlation between the two sets, the measure is said to have high split-half reliability.

Parallel-forms reliability is similar in that two separate sets of questions are administered, but the questions on each form of the assessment are not chosen randomly. Inter-rater reliability is the degree to which different raters score the same responses and behaviors in the same way. Test-retest reliability is the degree to which scores are the same when the same measure is given to the same subjects twice.

26.

Statistical regression is **best** explained by which of the following?

If an individual's score is very low or very high on a pretest, the individual's score will be closer to the mean on the posttest

Errors are often made when scoring tests

When large numbers of people take a test, it is less likely for individual scores to be very high or very low

Test scores can often predict future scores on related material

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Correct answer: If an individual's score is very low or very high on a pretest, the individual's score will be closer to the mean on the posttest

Statistical regression refers to the tendency for a low-scoring or high-scoring test taker on the pretest to obtain a score closer to the mean on a posttest. This change in scores is due to error on the pretest due to environmental factors, chance, and personal influences.

27.

An elementary school student is given a test of cognitive ability. He scores in the 80th percentile as compared with other students his age and grade level. What does this student's score mean?

The student's score is higher than 80% of the scores, and 20% of the scores are higher than his score

The student scored higher than 79% of the scores, and 20% of the scores are higher than his score

The student has a raw score of 80 on the test and has an above-average IQ

When the student takes the test again, he has an 80% chance of earning the same score

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Correct answer: The student's score is higher than 80% of the scores, and 20% of the scores are higher than his score

Many standardized test results are given in percentiles, which are values below which a specified percentage of cases fall. A student who scores in the 80th percentile has scored higher than 80% of the scores. 20% are higher than this student's score.

28.

Sometimes research must be approved by an Institutional Review Board (IRB). Which of the following studies definitely requires IRB approval?

A study that receives a portion of its funding from federal sources

A study that is completely supported by private funds

A study that uses a combination of animal and human subjects

A study that includes minors under the age of 18 as participants

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Correct answer: A study that receives a portion of its funding from federal sources

When a research study is funded partly or fully by federal sources, it must be approved by an Institutional Review Board (IRB), sometimes known as a Human Subjects Committee. The duty of the IRB is to review the study's methods to ensure they are ethical.

29.

In what situation might a mixed-method research design be used?

A counselor wants to test a particular type of cognitive behavioral intervention, then document one client's experience with the treatment

A counselor wants to write a comprehensive review of the cognitive behavioral treatments that have been used over the past century

A counselor wants to compare interventions by randomly assigning individuals to two counseling groups

A counselor wanting to build her private practice is interested in exploring the relationship between client age and cost per session

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Correct answer: A counselor wants to test a particular type of cognitive behavioral intervention, then document one client's experience with the treatment

Mixed-method research designs utilize both quantitative and qualitative research approaches in the same design. Researchers who choose to combine approaches typically use one method, such as quantitative research, first and follow it by using the second method. In this example, the counselor would use quantitative methods to measure the effects of the cognitive behavioral intervention, and would then use a qualitative approach to record one client's experience with that intervention.

30.

What is also known as Type II error?

Beta

Alpha

t-test

Multivariate analysis of variance

Correct answer: Beta

Type II error, also known as beta error, refers to researchers' failure to reject the null hypothesis when there is a difference between groups. Researchers can change the significance level to change the probability of Type I and Type II errors occurring. If the significance level goes down, Type I error decreases, though Type II error increases.

31.

The National Defense Education Act was passed in 1958 and did which of the following?

Provided money for the training of school counselors

Enforced discrimination in public schools

Allowed any individual to attend public school no matter their age

Increased spending for schools with military programs

Correct answer: Provided money for the training of school counselors

The National Defense Education Act was passed in 1958 and provided additional funding for public schools for a variety of purposes. There are ten titles within the law, and Title V includes funding for the training of guidance counselors along with the addition of standardized testing to identify academically gifted students.

32.

What is one advantage of samples of convenience?

They produce candidates for study without the need for a more detailed process

It provides a random sample of subjects

It allows researchers to use smaller sample sizes

Validity is higher than with other forms of sampling

Correct answer: They produce candidates for study without the need for a more detailed process

Samples of convenience refer to a form of non-probability sampling that is gathered with the goal of obtaining any participant that meets specific characteristics. The main advantage of this approach is that it is an expedient way to gather candidates for study. One drawback of this technique is that because the sample is not random, study results will not be representative of the greater population.

33.

How has an increased pressure to examine the "bottom line" in the field of counseling contributed to intervention and treatment?

It has led to more research studies on short-term therapies

It has resulted in more wraparound services for individuals with serious mental illnesses

It has neglected children and adolescents while focusing only on adults

It has discouraged counselors from wanting to provide comprehensive, effective mental health treatment

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Correct answer: It has led to more research studies on short-term therapies

Since the 1970s, funding has played an increasingly important role in accountability practices in the fields of counseling and human services. Because more government funding sources, health insurance companies, and HMOs are involved in supporting counseling programs, there is more emphasis on short-term interventions that are typically more affordable than longer-term therapies.

34.

All the following are true about CACREP, **except**:

It was founded in 1940

It accredits programs at master's and doctoral levels

It prepares future practitioners

It establishes standards for professional competence

Correct answer: It was founded in 1940

The Council for Accreditation of Counseling and Related Educational Programs (CACREP) was founded in 1981 (not 1940) as the organization that accredits master's and doctoral counselor training programs. CACREP supports and encourages review of existing academic counseling programs, establishes standards for professional competence and prepares future practitioners.

35.

The normal curve, also called the bell-shaped curve, distributes scores into six equal parts. What percentage of scores includes four standard deviations?

95%

99%

68%

50%

Correct answer: 95%

The normal, or bell-shaped, curve distributes scores into six parts. Three of these parts are below the mean, and three are above the mean.

- *68% (34% and 34%) comprise one standard deviation from the mean in either direction, and*
- *95% (13.5% and 13.5%) comprise two standard deviations from the mean in either direction, and*
- *99% (2% and 2%) comprise three standard deviations from the mean in either direction.*

Taking the four standard deviations around the mean (the two standard deviations in either direction added together) gives us 95% of scores.

36.

How did the Tarasoff case in 1976 impact counselors' duty to warn?

It implied that counselors must break confidentiality to warn intended victims of harm

It suggested that unless counselors are completely sure of a client's intent, they do not need to warn potential victims

It ruled that any citizen, not just counselors, must inform law enforcement if a threat is made toward someone else

It required that counselors inform law enforcement when they are seeing clients for domestic violence counseling

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Correct answer: It implied that counselors must break confidentiality to warn intended victims of harm

In 1976, a California court ruled that failure of a mental health professional to warn the intended victim of a client was professionally irresponsible. This decision was made after an individual was murdered by the client of a psychologist at the University of California. The client had threatened to kill the victim during sessions with the psychologist. For counselors, this means that they must be skilled at determining their clients' intent.

37.

When research for a study is gathered over a long period of time, what threat to internal validity is **most** likely?

Maturation

Experimenter bias

Statistical regression

Hawthorne effect

Correct answer: Maturation

Internal validity refers to the degree to which external influences have been controlled. One threat to internal validity is maturation in subjects, referring to the growth and development of subjects that may not be related to the study intervention. The longer the period of time over which data is gathered, the higher the risk of results due to maturation.

38.

According to the ACA Code of Ethics, which of the following is **not** unethical?

A counselor has sexual contact with a client she saw briefly for therapy ten years earlier

A counselor has sexual contact with one of her supervisees

A counselor agrees to provide couples' therapy to an ex-boyfriend she split from three years ago

A counselor and his client agree that they are mutually attracted to each other and use the time in sessions to have sexual contact

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Correct answer: A counselor has sexual contact with a client she saw briefly for therapy ten years earlier

Sexual contact between a counselor and a client is unethical and should not occur under any circumstance. If a client expresses sexual attraction for a counselor, or vice versa, this should be addressed in consultation, and the client can be referred to another provider if the issue is unresolvable. Sexual relationships between counselors and supervisees is also unethical. However, though some state laws may define a different time period, the ACA Code of Ethics specifies that sexual contact may not necessarily be unethical if it occurs more than five years after the counseling relationship ends.

39.

A significance level for a particular study is .05. What does this mean in terms of the results of the study?

If the study is conducted 100 times, researchers are willing to accept the possibility of rejecting the null hypothesis in error five of those times

If the study is conducted 100 times, researchers are 5% certain their hypothesis will be correct

Data reported in the study has only a five percent chance of being accurate

Researchers believe that five percent of the time study participants report inaccurate data

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Correct answer: If the study is conducted 100 times, researchers are willing to accept the possibility of rejecting the null hypothesis in error five of those times

Significance levels refer to the possibility of the researcher either rejecting the null hypothesis when it should have been accepted, or accepting the null hypothesis when it should have been rejected. Before analyzing data, researchers should select the significance level to reflect their willingness to make an error. Conventional significance levels in research are .05, .01, and .001. By selecting a significance level of .05, researchers are willing to accept the possibility of rejecting the null hypothesis in error five out of a hundred times.

40.

What is the **main** purpose of the AASCB?

To assist counselors moving from one state to another

To provide clear guidelines to counselors regarding ethical practice

To create a universal definition of the counseling profession

To create counselor training standards for all types of counseling

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Correct answer: To assist counselors moving from one state to another

The American Association of State Counseling Boards (AASCB) is an organization that assists licensed counselors moving from one state to another. Because states have different laws regarding licensure of professional counselors, the AASCB helps counselors navigate the different educational requirements, titles, exams, and scopes of practice among states.

41.

A counselor wants to conduct a research study using surveys to gather information. What is the minimum sample size she should use?

100

30

15

75

Correct answer: 100

Choosing the correct sample size is important, as it can influence statistical hypothesis testing. There are suggested minimal sampling sizes depending on the kind of research conducted. For surveys, the minimum sample size recommended is 100 people.

42.

What is the typical range for the standard deviation when calculating a z-score?

-3.0 to 3.0

-1.0 to 1.0

-4.0 to 4.0

-2.0 to 2.0

Correct answer: -3.0 to 3.0

One of the most commonly used standardized scores is the z-score. For a z-score, the mean is 0 and the standard deviation is 1.0. When the raw score is below the mean, the z-score is negative, and when the raw score is above the mean, the z-score is positive. The range for standard deviation of a z-score is -3.0 to 3.0.

43.

When the values of a mode and a median are lower than the mean, the distribution of scores is said to have what kind of skew?

Positive

Negative

Neutral

Zero

Correct answer: Positive

Assessments are often scored using measures of central tendency, including mean, median, range and mode. Sometimes scores are not evenly distributed along a bell curve and have a positive or negative skew. When a distribution of scores has a positive skew, the mode (the most frequently occurring score) and the median (the middle score) are lower than the mean (the average of all scores).

44.

All the following are descriptive ways of explaining statistical data, **except**:

Analysis of variance

Frequency counts

Standard deviations

Means

Correct answer: Analysis of variance

Statistical analysis can be descriptive or inferential. Descriptive statistics aim to describe the data that is collected and include means, percentages, and standard deviations.

Analysis of variance is a type of inferential data which is used to measure the probability of an event occurring in the population.

45.

To determine internal consistency on an instrument with non-dichotomous items, what statistical measure should be applied?

Cronbach alpha coefficient

Kuder-Richardson formula

Coefficient of nondetermination

Standard error of measurement

Correct answer: Cronbach alpha coefficient

There are various ways to measure the internal consistency of a test. One is to measure the consistency between items, as reliability increases when there are more homogenous or similar items on the test. The Cronbach alpha coefficient can be applied when items are nondichotomous, meaning they offer more than two answer options. Kuder-Richardson formulas can be used when the test contains dichotomous items, such as true-false questions.

46.

In regard to research studies, when is deception justifiable?

When there is no risk to the subjects

Not under any circumstances

When subjects have been informed that researchers might be collecting different information from what they initially claim

In any situation, as subjects must sign waivers before participating in the study

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Correct answer: When there is no risk to the subjects

As in counseling practice, ethical issues arise at times during research. Deception refers to times when subjects are unaware that a certain type of information is being gathered, and is justifiable if there is no risk to the subjects. After data is collected and the study has concluded, researchers should inform the subjects of all types of data that were collected and why it was necessary for subjects to be unaware.

47.

All the following are true about non-experimental survey designs, **except**:

Surveys are time-consuming and difficult to administer

The response rate of survey research is often below 50 percent

It is difficult to generalize findings from survey designs

They can measure attitudes, perceptions, and many other subjective experiences

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Correct answer: Surveys are time-consuming and difficult to administer

There are several types of research that gather information and data in a variety of ways.

Surveys are typically easy to complete, can take very little time, and are cost-effective to administer. They can also be a useful way to measure attitudes, perceptions, and other subjective experiences.

However, the response rate of surveys is often below 50 percent, and unless researchers know specifics about the characteristics of the respondents, it can be difficult to generalize any findings.

48.

When a correlation coefficient (*r*) is 1.00, which of the following is **true**?

If you know one score, you can predict the next score with 100 percent certainty

There is a 10 percent chance the next score will be the same

Out of 100 scores, half of them will be equal

The mean of all the scores is equivalent to the mode

Correct answer: If you know one score, you can predict the next score with 100% certainty

In order to correctly predict the relationship between two sets of numbers, researchers often calculate the Pearson Product-Moment Correlation Coefficient (r). The value of r ranges from -1.00 (a perfect negative correlation) to 1.00 (a perfect positive correlation). This means that if the value of the first set of numbers is known and the value of r is 1.00, then researchers can accurately predict the second set of numbers 100% of the time.

49.

What is a correlation between two variables?

A bivariate correlation

A multivariate correlation

A reliability index

A variability index

Correct answer: A bivariate correlation

A correlation is a demonstrated relationship between variables. A bivariate correlation is a correlation between two variables. A correlation between three or more variables is called multivariate.

Indices of statistical reliability and variability are not referred to by their relationship to correlation.

50.

What is a commonly used technique for measuring attitudes or opinions, that typically gives respondents five answer choices such as Always, Often, Sometimes, Almost Never, and Never?

Likert scale

Factor analysis

Scattergram

Chi-square

Correct answer: Likert scale

The Likert scale is commonly used on questionnaires and surveys to measure respondents' opinions, perceptions, and attitudes. Questions using the Likert scale typically give five choices (sometimes seven or nine) that range from one concept to the opposite concept, such as Always, Often, Sometimes, Almost Never, and Never.

51.

Why might the *t*-test be used?

To determine whether the mean scores of two groups are significantly different from each other

To determine the likelihood that the null hypothesis is true

To evaluate more than one dependent variable

To control the influence of one or more independent variables on the dependent variable

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Correct answer: To determine whether the mean scores of two groups are significantly different from each other

When there are two groups, and therefore two mean scores, researchers can use the t-test. This test compares the t value from the first calculation to the t value in the second calculation to find whether the mean scores of the two groups are significantly different from each other.

52.

All the following are possible threats to internal validity, **except**:

Ecological validity

Instrumentation

Experimenter bias

Statistical regression

Correct answer: Ecological validity

Internal validity refers to the degree to which external influences have been controlled. There are many threats to internal validity, including differences between subjects, unreliable instruments, maturation, attrition, experimenter bias, and statistical regression.

Ecological validity refers to the extent to which study results can be generalized to another setting and is an example of external, not internal, validity.

53.

Title IX was passed in 1972 and prohibits sex discrimination in schools in academics and athletics. The focus of this law has **mostly** been on which of the following?

Ensuring that females have the same opportunities as males in sports

Providing additional opportunities to females in math and science classes

Prohibiting gender-specific restrooms in schools

Providing the same sports to both females and males, such as football and baseball

---

Correct answer: Ensuring that females have the same opportunities as males in sports

Title IX was passed in 1972 as part of the educational amendments, and bans sex discrimination in K-12 schools and colleges. While Title IX technically applies to both academics and athletics, the focus has mostly been on giving women equal opportunities with men in sports, and giving women the same proportion of participation in athletic opportunities as men have.

54.

Which of the following is **not** true regarding writing and publication of research?

Manuscripts should be written according to *The Chicago Manual of Style*

Sexist language should be avoided

A manuscript should be submitted to only one journal at a time

All authors of the manuscript should be acknowledged

Correct answer: Manuscripts should be written according to The Chicago Manual of Style

When writing a professional research manuscript, there are several guidelines researchers should follow. Most research should be written according to the Publication Manual of the American Psychological Association, not The Chicago Manual of Style. In addition, sexist language should be avoided and a research manuscript should only be submitted to one journal at a time for publication review.

55.

A researcher wants to better understand the impact of protein intake on elementary-aged children's test scores. He arranges for students at a school in an upper-class area to receive a protein-heavy lunch each day for one month, and he tracks their test scores. These scores are compared to those of students at a school in an impoverished part of town. The students at the second school continued to eat their regular diets without special attention paid to protein. The researcher finds that the test scores, on average, are 15 points higher than test scores at the second school. He concludes that a protein-rich diet contributes to academic success.

What does this study lack?

Internal validity

A hypothesis

A single-subject design

A conclusion

Correct answer: Internal validity

Internal validity refers to the degree to which external influences have been controlled. A common threat to internal validity is the selection of subjects and the individual differences between the subjects. In this question, there are likely many differences between the impoverished students and the upper-class students other than protein intake. The researcher should control as much as possible for these differences before making any conclusions about the effects of protein on test scores.

56.

A counselor heading a needs assessment of a program insists that random sampling be used as he prepares to arrange interviews and focus groups. This counselor is trying to ensure:

validity

reliability

predictability

anonymity

Correct answer: validity

A needs assessment is an important element of program planning, as it defines the differences between what currently exists and what is needed or desired to change the situation. When collecting data, random sampling should be used when possible in order to obtain an accurate representation of needs. This ensures that the data is valid and can be applied to the broader system.

57.

The first professional counseling association, the National Vocational Guidance Association, was founded in what year?

1913

1942

1927

1890

Correct answer: 1913

The modern history of the counseling field dates back to the late 19th century. In 1913, the National Vocational Guidance Association was founded as the first professional counseling association, and in 1952 merged with several other organizations to form what would later become the American Counseling Association (ACA).

58.

A research study recruits only individuals with extremely low social skills on a certain measure. After employing an intervention, the researchers find that many of the study subjects scored at or close to the mean. Which of the following is the **most** likely explanation for these results?

Statistical regression

Reactivity

Demand characteristics

Placebo effect

Correct answer: Statistical regression

Internal validity refers to the degree to which external influences have been controlled. There are many threats to internal validity, however, including statistical regression. This can occur when subjects are recruited for scoring very high or very low on certain measures. Due to statistical regression, researchers would expect these subjects' scores to be closer to the mean even without intervention, so this should be carefully controlled to ensure results are not attributed completely to the intervention.

59.

What organization sponsored the *20/20: A Vision for the Future* task force?

American Counseling Association

Vocation Bureau

American Personnel and Guidance Association

Council for the Accreditation of Counseling and Related Educational Programs

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Correct answer: American Counseling Association

The American Counseling Association (ACA) is an organization dedicated to the growth and enhancement of the counseling profession. In 2010, the ACA sponsored a task force, 20/20: A Vision for the Future, which worked to find this mutually agreeable definition of counseling: "Counseling is a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals."

60.

Which of the following is seen as an alternative to CACREP?

MPCAC

ACA

AACD

APGA

Correct answer: MPCAC

The Master's in Psychology and Counseling Accreditation Council (MPCAC) is a coalition of master's degree programs in counseling psychology, as these programs are not eligible for accreditation by the APA (American Psychological Association) or CACREP (The Council for Accreditation of Counseling and Related Educational Programs). Some educators and counselors view the MPCAC as an alternative to CACREP.

61.

The American Counseling Association defines counseling as a profession that helps clients to accomplish what four types of goals?

Mental health, wellness, education, and career

Individual, family, community, and culture

Social, cultural, individual, and ethnic

Immediate, short-term, long-term, and lifelong

Correct answer: Mental health, wellness, education, and career

The American Counseling Association (ACA) is an organization dedicated to the growth and enhancement of the counseling profession. In 2010, the ACA initiated a task force to define counseling as a profession that empowers clients "to accomplish mental health, wellness, education, and career goals."

62.

Which of the following is an example of a "title-control" policy?

A counselor can practice counseling but cannot legally advertise using the title unless they are licensed

No one can practice counseling without a license

A counselor can only advertise within his or her area of study

A counselor is only allowed to use the title Licensed Professional Counselor

---

Correct answer: A counselor can practice counseling but cannot legally advertise using the title unless they are licensed

Different states have different laws regarding counselors' licensure and practice. "Title-control" means that anyone can practice counseling but cannot legally advertise using the title, such as Licensed Professional Counselor, unless they are licensed. The majority of states have title-control and practice-control laws, meaning no one is allowed to practice counseling without a license.

63.

Two hundred college students are enrolled in a genetic biology course. Half comprise a control group, while the other half are randomly assigned to participate in an hour-long interactive seminar each week. Students' final test grades are examined at the end of the semester to determine whether the seminar was associated with better comprehension and understanding of course concepts. What type of research design was used?

True experimental

Quasi-experimental

Comparative

Non-experimental

Correct answer: True experimental

Researchers can choose from several different research designs depending on the purpose of the research as well as time, money, and people that are available and willing to participate. A true experimental design uses experimental and control groups that are comprised of randomly assigned participants. Researchers who use experimental designs typically want to determine cause-and-effect relationships, like the relationship between test grades and a differently formatted seminar in this example.

64.

Over the past 50 years, there has been a push for accountability in the counseling field, primarily motivated by:

funding

new psychiatric medications

serious mental illnesses

client empowerment

Correct answer: funding

Since the 1970s, funding has played an increasingly important role in accountability practices in the fields of counseling and human services. Because more government funding sources, health insurance companies, and HMOs are involved in supporting counseling programs, there is pressure to demonstrate the usefulness of specific interventions and techniques. Goals and objectives have also become more important recently, as they are used to show effectiveness and to evaluate programs.

65.

Budgeting, supervision, marketing, and evaluation are all essential components of:

managing a counseling program

providing services to individuals and families

developing an effective group therapy intervention

determining what needs a program has

Correct answer: managing a counseling program

Counseling program management is similar to other management positions in that it requires a specialized set of skills. These include strategic planning, which refers to assessment of the current state of the program and how it might look different in the future, program design and development, budgeting, personnel management, supervision, evaluation, and marketing and public relations.

66.

Which of the following is **not** a 2016 CACREP standard?

Geriatric counseling

College counseling and student affairs

Career counseling

Clinical rehabilitation counseling

Correct answer: Geriatric counseling

The Council for Accreditation of Counseling and Related Educational Programs (CACREP) is the organization that accredits master's and doctoral counselor training programs. It has developed standards for professional competence and includes seven master's level programs: addictions; career; clinical mental health; clinical rehabilitation; college and student affairs; marriage, couple and family; and school. CACREP also accredits one doctoral program, counselor education and supervision. Geriatric counseling is not one of these standards.

67.

Quasi-experimental design is similar to true experimental design, with the exception of which of the following?

Quasi-experimental designs do not randomly assign subjects to treatment and control groups, while true experimental designs do use randomization

Quasi-experimental designs investigate whether there are differences between two groups, while true experimental designs explore why these differences exist

Quasi-experimental designs describe a state of events, while true experimental designs determine cause-and-effect relationships

Quasi-experimental designs measure the existence of relationships between two or more variables, while true experimental designs measure the degree of the relationship

---

Correct answer: Quasi-experimental designs do not randomly assign subjects to treatment and control groups, while true experimental designs do use randomization

True experiment and quasi-experiment are both types of experimental research designs that aim to measure differences between two or more variables. A true experimental design uses experimental and control groups that are comprised of randomly assigned participants. A quasi-experimental design is similar in structure to a true experimental design, but differs in that participants are not randomly assigned to treatment and control groups.

68.

What is **not** a kind of analysis of variance (ANOVA)?

T-test

Factorial

One-way

Multivariate

Correct answer: T-test

One-way Analysis of Variance (ANOVA) can be used to determine differences between three different forms of one variable. Factorial ANOVA is used to find whether significant differences between two variables exist. Multivariate Analysis of Variance (MANOVA) is the statistic used when there is more than one dependent variable involved in the analysis. When there are two groups, and therefore two mean scores, researchers can use the t-test.

69.

Counselors may be taken to court for all of the following **except** which one?

Report of suspected child abuse to law enforcement

Sexual harassment of a client

Misrepresentation of professional service

Negligence

Correct answer: Report of suspected child abuse to law enforcement

Counselors, like other health professionals, may be taken to court for causing harm to clients for many different reasons, such as negligence, misrepresentation of professional service, or sexual harassment. Counselors are mandated to report suspected or reported child abuse and neglect to the proper authorities, and cannot be taken to court for doing so.

70.

Which of the following is an example of a directional hypothesis?

More girls who graduate from high school will attend a four-year college than males who graduate from the same high schools

There is no difference between the rates of girls and boys who attend college after high school

The proportion of girls and boys who graduate from high school and enroll in a four-year college will be different

It is impossible to measure the differences between girls and boys who attend college after graduating from high school

---

Correct answer: More girls who graduate from high school will attend a four-year college than males who graduate from the same high schools

All research studies must have a hypothesis, which is the research question that is to be answered. This hypothesis can be null, directional, or nondirectional. The null hypothesis states that there are no effects of the independent variable on the dependent variable and therefore no differences in the control and test groups. Directional hypotheses state that the scores of one particular group will be significantly different than scores in another identified group. Nondirectional hypotheses state that there will be statistical differences between groups, but it is unclear which group's scores will be higher or lower.

71.

A researcher wants to examine the reliability of an instrument by administering it twice on the same group. About how long should the researcher wait between administrations?

Two weeks

Three days

One month

Two months

Correct answer: Two weeks

Reliability refers to the degree to which a test or assessment is consistent and can be expected to provide similar results if the same subjects were to participate in the same study again. Sometimes, researchers test a study's stability by testing the same group twice, then comparing the results of both. It is recommended that researchers wait about two weeks before re-administering a test to the same group.

72.

Of the following, when might a formative evaluation be **most** helpful?

When an agency wants to know how well a new group therapy intervention works

When a department wants to measure the effectiveness of a parenting program at the end of the fiscal year

When a supervisor wants to know how productive individual workers are throughout the week

When administrators want to know how well departmental goals have been met

---

Correct answer: When an agency wants to know how well a new group therapy intervention works

Evaluation is a necessary part of any counseling program, as it gathers information about how well an intervention is working and what can be improved. Formative evaluation is the process of gathering information about how well a new intervention works, and collecting information over a period of time. Summative evaluation, by contrast, is typically a summary of how well an intervention has worked and is conducted over a shorter period of time.

73.

Within a set of scores, the mean is 102, the median is 116, and the mode is 120. What is **most** likely about this distribution of scores?

It has a negative skew

It has a positive skew

Its skew is unknown

Its skew could be positive or negative depending on the number of scores

---

Correct answer: It has a negative skew

Assessments are often scored using measures of central tendency, including mean, median, range and mode. Sometimes scores are not evenly distributed along a bell curve and have a positive or negative skew. When a distribution of scores has a negative skew, the mode (the most frequently occurring score) and the median (the middle score) are higher than the mean (the average of all scores). In this question, because the mode of 120 and the median of 116 are higher than the mean of 102, the curve has a negative skew.

74.

Five students scored as follows on an exam: 74, 80, 81, 91, and 97. What is the inclusive range?

24

84.6

23

81

Correct answer: 24

The range is the highest score minus the lowest score. The inclusive range, which includes every individual score, is the highest score minus the lowest score plus one (1).

97 - 74 = 23 + 1 = 24

75.

Given the set of numbers below, what is 68?

55, 57, 59, 61, 64, 68, 68, 70

Mode

Range

Median

Mean

Correct answer: Mode

Assessments are often scored using measures of central tendency, including mean, median, range, and mode. Mode refers to the most frequent score within a certain distribution. In the question, 68 is the mode because it occurs more often than any other number.

76.

The ACA Code of Ethics comes from all the following sources, **except**:

Insurance company requirements

Cultural values and mores

Legal judgments

The wisdom of members of the profession

Correct answer: Insurance company requirements

Counselors should study and be familiar with the American Counseling Association (ACA) Code of Ethics. The code outlines what is right or wrong in terms of professional counselors' conduct. The code's content comes from the experiences of ACA members, legal judgments, opinions, and cultural values, norms, and mores.

While insurance companies may occasionally become involved in ethical dilemmas and situations, the code is developed separately from any insurance company requirements.

77.

Which of the following is **true** regarding confidentiality and group counseling?

Group counselors may break confidentiality if they are legitimately concerned someone is in danger of hurting themselves or someone else

Counselors have the right to discuss with others outside the group some of the information shared by group members

After the group ends, members are allowed to talk about other group members outside of the group

Confidentiality is rarely discussed in groups because of the high probability it will be broken anyway

---

Correct answer: Group counselors may break confidentiality if they are legitimately concerned someone is in danger of hurting themselves or someone else

Confidentiality is difficult to ensure in group counseling, though all members should be aware that information shared in the group is confidential. Exceptions to this rule include times when group counselors are concerned someone (not always a group member) is in danger of hurting themselves or someone else.

Counselors should keep all other information confidential and refrain from sharing it with members outside of the group. Even after groups terminate, group members should protect the privacy of others within the group.

78.

In 2015, five states legally permitted physician-assisted suicide. Under what circumstance is this permitted?

The individual must have a terminal illness

The individual's family must agree that the individual's happiness is compromised

The individual must have clinical depression and feelings of worthlessness

The physician must agree that the individual is prepared to die

---

Correct answer: The individual must have a terminal illness

Physician-assisted suicide is an ethical issue about which many health care workers disagree. As of 2015, five states (Oregon, Washington, Montana, New Mexico, and Vermont) allow physician-assisted suicide, provided the individual has a terminal illness. In these states (only in one county in New Mexico), physicians are legally permitted to prescribe medications to cause death.

79.

In some medication-related studies, the control group is given a "sugar pill" rather than the actual medication or drug, so research subjects will be unaware of whether they are in the research group or the control group. However, sometimes subjects in the control group experience changes in symptoms due to the psychological power of suggestion. This is known as the:

placebo effect

Hawthorne effect

novelty effect

disruption effect

Correct answer: placebo effect

External validity is the degree to which study results can be applied to populations outside of the study. There are many threats to external validity, including the placebo effect. This occurs when control subjects expect to be influenced by the intervention and unintentionally respond to the control treatment (the placebo).

80.

All of the following are commonly used post hoc tests **except** which one?

Mann-Whitney U test

Scheffe's test

Newman-Keuls test

Tukey's HSD test

Correct answer: Mann-Whitney U test

Researchers might apply a test after the analysis of variance is calculated (post hoc) if it is unclear as to which mean scores are significantly different from each other. Post hoc tests that may be able to clarify this problem include Scheffe's method, Tukey's HSD (Honestly Significant Difference), Newman-Keuls, and Duncan's new multiple range test. The Mann-Whitney U test is a nonparametric measure used when scores collected from two independent samples do not follow normal distributions.

81.

What is one advantage of using non-random or nonprobability samples?

They can yield very useful data

Results can be generalized to the greater population

It is always cheaper than using random sampling

It accurately represents proportions of individuals that exist in the population

---

Correct answer: They can yield very useful data

There are many types of sampling, which refers to the selection of subjects from a part of the population. While most studies use random sampling to conduct tests, some use volunteers or samples for convenience. While these samples are less likely than random samples to yield a normal distribution of scores, these non-random or nonprobability samples can still result in useful data.

82.

A researcher wants to determine the impact that income level, educational achievements, race, and religious values have on whether children graduate from college. What statistical measure would give the **best** predictive power of these variables on the dependent variable?

Multiple regression

Scatterplot

T-test

Factor analysis

Correct answer: Multiple regression

Multiple regression can be used when a researcher wants to examine the strength of the relationship of independent variables on a dependent variable. Multiple regression is able to add together the predictive power of many independent variables, as in this example.

83.

At times, counselors are sued by clients for malpractice. For a malpractice claim to succeed in a court of law, three conditions must be met, in addition to the establishment of a professional relationship. Which of the following is **not** one of these three conditions?

The counselor did not have professional liability insurance

The client suffered physical or psychological injury

There was a breach of duty

The injury was caused by a breach of duty

Correct answer: The counselor did not have professional liability insurance

Malpractice is the failure to provide services at a level that would be expected of a professional in similar circumstances. When a malpractice claim enters a court of law, there are four conditions that must be met: a professional relationship must have been established; there must have been a breach of duty; the client must have suffered injury, physical or psychological; and the injury must have been caused by a breach of duty. A counselor can be sued with or without professional liability insurance.

84.

In which of the following situations is it acceptable for the counselor to break confidentiality?

During a session for survivors of suicide, a group member lets everyone know that he plans to kill himself that evening when he returns home

A group member confesses to others in the group that he is having an extramarital affair

The climate of a group session becomes so hostile that two group members get into a fist fight

The counselor realizes that one of the individuals in her group graduated with her from high school

---

Correct answer: During a session for survivors of suicide, a group member lets everyone know that he plans to kill himself that evening when he returns home

While confidentiality is difficult to assure in group counseling, counselors should impress upon all group members the need for confidentiality. Exceptions to confidentiality include those times when a group member expresses a desire to hurt or kill himself or others. If a group member lets everyone know that he has a plan to kill himself and does not contract for safety, the group counselor has a responsibility to hospitalize the group member or contact the proper authorities for help.

Extramarital affairs, because they do not pose immediate and direct physical danger, should not be shared outside of the group. Physical altercations are not acceptable in groups, and only if outside help is needed to break up the fight (or if one of the group members presses charges) would confidentiality need to be broken. If the counselor realizes she knows a group member from a different context, this should be addressed privately with the group member.

85.

Which of the following is an accurate statement about deductive research?

It uses existing theories to explore relationships between certain elements

It tends to be descriptive and correlational

It leads to the building of a specific theory

It is practical in nature

Correct answer: It uses existing theories to explore relationships between certain elements

There are two types of research: inductive and deductive. Inductive research begins at the practical level and tends to descriptively add to developing theories. Deductive research comes from theory that is already established and tends to focus on determining what the relationships between different elements of the theory are.

86.

When neither the researcher nor the study subjects know which group is the control group and which is the experimental group, this is known as what technique?

Double-blind

Single-subject

Cross-sectional

Halo effect

Correct answer: Double-blind

Sometimes, the risk of experimenter bias during research studies is unavoidable due to researchers having preconceived notions and expectations. The double-blind technique eliminates the risk of experimenter bias interfering with results by structuring the experiment so that neither the researcher nor the subject knows who is in the test group and who is in the control group until after results have been gathered and recorded.

87.

Compassion fatigue is common in the counseling field. Which of the following is **not** a symptom of compassion fatigue?

An increased desire to help clients

Boredom during sessions

Loss of interest in client concerns

Loss of empathy

Correct answer: An increased desire to help clients

It is common for counselors to experience compassion fatigue, a result of working with difficult client issues. Signs of compassion fatigue include loss of interest in client concerns, boredom, lack of empathy, and others. Counselors who are experiencing compassion fatigue, therefore, typically have a decreased (rather than increased) desire to help clients.

88.

A four-year-old preschooler earns an age-equivalent score of four-point-five on an assessment. What does this score mean?

The child earned a score equivalent to most four-and-a-half-year-old children

The child's score is lower than four-point-five percent of other children her age

The child got 45 percent of the questions correct

The child's score is higher than four-point-five percent of other children her age

---

Correct answer: The child earned a score equivalent to most four-and-a-half-year-old children

Achievement tests are often reported in terms of age-equivalent scores. This means an individual who earns a score equivalent to four-point-five has correctly answered the same number of items that an average four-and-a-half-year-old answers. Grade-equivalent scores work similarly, in that if a student correctly answers the same number of items that an average seventh grader completes, that student receives a grade-equivalent score of seven.

89.

An individual's score on an assessment has a z-score of 0. What does this mean?

The individual's score is equal to the mean

The range for the standard deviation is -1.0 to 1.0

The individual's score is the furthest away from the mean

The individual's score is equal to the range

Correct answer: The individual's score is equal to the mean

One of the most commonly used standardized scores is the z-score. For a z-score, the mean is 0 and the standard deviation is 1.0. When the raw score is below the mean, the z-score is negative, and when the raw score is above the mean, the z-score is positive. The range for standard deviation of a z-score is -3.0 to 3.0.

90.

Neurobiology can often help clients understand why and how counseling can help them feel better. What concept refers to the brain's ability to reorganize itself and produce new neurons as the client experiences new situations and perspectives?

Neuroplasticity

Psychopharmacology

Logotherapy

Attending

Correct answer: Neuroplasticity

The relationship between neurobiology and psychotherapy is a complicated and fascinating one. Research shows that psychotherapy can alter neurons in the brain and restructure neural networks. Neuroplasticity refers to the brain's specific ability to produce new neurons and reorganize itself. This can be seen in clients with anxiety or depression who engage in cognitive behavioral therapy.

91.

Under what circumstances are the mean, median, and mode all identical?

When the distribution of scores is symmetrical

When all scores are evenly divided by the same numbers

When all scores are skewed in either direction

When the scores have a positive skew

Correct answer: When the distribution of scores is symmetrical

A distribution of scores can be examined using three types of measures. Mean refers to the average of a list of scores; median is the middle score on a distribution of scores; and mode is the most frequent score in a distribution of scores. The mean, median, and mode are identical when the distribution of scores is symmetrical, rather than skewed in one direction or another.

92.

A counseling student in a non-CACREP program plans to graduate next May. Which of the following is **true**?

Before she can become certified, she must have 3,000 hours of post-graduate work experience

As long as she logs 1,000 hours of internship experience, she can become certified after graduation

She must pass the National Counselor Exam before graduation in order to become certified

She is only eligible for national certification by NBCC

Correct answer: Before she can become certified, she must have 3,000 hours of post-graduate work experience

Graduate students enrolled at an institution that is not accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) become board eligible at graduation and must complete 3,000 hours of post-degree work experience. Individuals enrolled in a CACREP program can become certified upon graduation.

93.

At what point in the group process should the counselor obtain informed consent?

Before the group begins

At the first group session

At some point during the first stages of group treatment

Informed consent is only needed in individual work, not when working with groups

---

Correct answer: Before the group begins

Informed consent includes the rights and expectations of group members, as well as what group members can expect from the counselor and the group as a whole. The counselor should speak individually with each group member before the group begins to answer questions and ensure that the member understands.

94.

When would a researcher use nonparametric (rather than parametric) statistics?

When no assumption about the variance of the population scores can be made

When a sample is randomly drawn from a population

When data is normally distributed along a bell-shaped curve

When it can be assumed that the sample is homogeneous to the variance of the population

---

Correct answer: When no assumption about the variance of the population scores can be made

Researchers may use parametric or nonparametric statistical measures, depending on the distribution of scores. Parametric statistics, such as the t-test and analysis of variance, can be used when samples are randomly drawn from the population and results are distributed along a normal curve. Nonparametric statistics, such as chi-square and the Mann-Whitney U test, are used when data is not normally distributed and variances are inconsistent.

95.

A group counselor is interested in the long-term relapse rates of individuals in substance abuse groups. After examining relapse rates over a five-year span, the counselor finds that individuals in same-sex groups experienced fewer relapses than individuals in groups with both males and females. This is known as what type of research design?

Ex post facto

True experimental

Descriptive

Correlational

Correct answer: Ex post facto

An ex post facto research design, also known as a causal-comparative design, is a non-experimental quantitative design that examines variables after the fact (ex post facto). The researcher can then draw several conclusions about why these relationships occur. The analysis of variance and the t-test are frequently used in ex post facto designs.

96.

What type of research is **more** valued in the counseling field?

Qualitative and quantitative are equally valued, as they can both make contributions to the field

Quantitative, because it is more accurate and predictable

Qualitative, because it is based on feelings and judgments

Neither quantitative nor qualitative, because both have severe shortcomings

---

Correct answer: Qualitative and quantitative are equally valued, as they can both make contributions to the field

Qualitative and quantitative research are two different kinds of research, and both have advantages. Qualitative research tends to study individual units in naturally occurring settings. With qualitative research, data is collected through observation, researchers' judgments and impressions are often used, it assumes that there are many different realities held by individuals and groups, and it has the goal of describing the nature of things. Quantitative research, by contrast, assumes there is one objective reality, studies samples or populations, uses statistical methods to compare results, and examines for causes and relationships. Either type of research can be used in the counseling field depending on the nature of the problem being explored.

97.

Two tests are administered to subjects participating in a research study. Each test measures true variance and error variance. The correlation between the two tests is .70. What is the amount of true variance measured in common?

49%

70%

54%

55%

Correct answer: 49%

True variance and error variance are both important concepts to measure, as researchers want to know whether the test actually measures what it is meant to measure. True variance is measured by finding the square of the correlation. In this question, the correlation between the two tests is .70. Since .70 x .70 = .49, the true variance between the two tests is 49%.

98.

Which of the following are examples of standardized scores that are used to compare different test scores for the same individual?

Z-score and T-score

Stanine and percentile

Z-score and stanine

Percentile and T-score

Correct answer: Z-score and T-score

Standardized scores are helpful when comparing several different test scores for the same person, as direct comparisons between different tests are impossible. A z-score shows the distance between the raw score and the population mean in units of standard deviation. A T-score also shows the difference between a raw score and the population mean, but the sample size must be above 30 and have an unknown population standard deviation.

99.

A counselor is conducting an initial assessment on a client who meets the criteria for obsessive-compulsive disorder. The client feels as if her symptoms are making it extremely difficult for her to function normally in her job, and her relationships with friends and family members have suffered. Based on research involving individuals with obsessive-compulsive disorder, what treatment recommendation(s) should the counselor make to this client?

A combination of medication and cognitive behavioral therapy

Family therapy

Interpersonal skills training

A combination of relaxation training and meditation

Correct answer: A combination of medication and cognitive behavioral therapy

Obsessive-compulsive disorders are characterized by a preoccupation with and engagement in repetitive behaviors. Currently, recommended treatment approaches include a combination of psychotropic medication and therapy. Cognitive Behavioral Therapy (CBT), particularly CBT that includes exposure and response prevention, has been shown to be particularly effective.