

Test Bank for Statistics for Criminology and Criminal Justice 4th Gau

Statistics for Criminology and Criminal Justice (4th)

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Total Questions: 60

Multiple Choice (35)

Q1. [Multiple Choice] · Cognitive Domain: Knowledge

The process of gathering and analyzing data in a systematic and controlled way using techniques and procedures that are accepted by other scientists in a discipline is commonly referred to as _____.

- a) speculation
- b) counter-intuitive induction
- c) science ✓ correct
- d) deductive introspection

Q2. [Multiple Choice] · Cognitive Domain: Knowledge

Procedures used by scientists to gather and analyze scientific data are referred to as _____.

- a) methods ✓ correct
- b) samples
- c) populations
- d) statistics

Q3. [Multiple Choice] · Cognitive Domain: Comprehension

A hypotheses is best described as _____.

- a) a set of proposed and testable explanations about reality that is bound together by logic and evidence
- b) a law governing the coherence of social and criminal phenomena
- c) a set of rules governing the application of statistical analytic techniques for examining quantitative data
- d) a single proposition, deduced from a theory, that must hold true in order for the theory itself to be considered valid ✓ correct

Q4. [Multiple Choice] · Cognitive Domain: Comprehension

In contrast with hypotheses, theories are _____.

- a) based on assumptions
- b) unchanging
- c) easy to test
- d) broad in scope ✓ correct

Q5. [Multiple Choice] · Cognitive Domain: Comprehension

Studies intending to assess whether policies, programs, or interventions are effective are referred to as _____ research.

- a) exploratory
- b) descriptive
- c) inferential
- d) evaluation ✓ correct

Q6. [Multiple Choice] · Cognitive Domain: Comprehension

In research, what does a sample refer to?

- a) the grouping of people, places, and objects used to generalize to the population
- b) a subset pulled from a population with the goal of ultimately using the people, objects, or places in the sample as a way to generalize to the population ✓ correct**
- c) the entire set, or universe, of people, places, or objects used to generalize to a population
- d) a technique used by social science researchers in attempts to prove existing theoretical propositions true in the general population

Q7. [Multiple Choice] · Cognitive Domain: Knowledge

Which sampling technique can help ensure participants mirror the population from which they were drawn?

- a) quota sampling
- b) purposive sampling
- c) probability sampling ✓ correct**
- d) snowball sampling

Q8. [Multiple Choice] · Cognitive Domain: Comprehension

A researcher observes that all the swans in a local pond are white. Based on the concept of falsification, what is the appropriate scientific approach to test the hypothesis "All swans are white"?

- a) Record the white swans and conclude the hypothesis is true.
- b) Seek out counterexamples, such as looking for black swans, to disprove the hypothesis. ✓ correct**
- c) Assume the hypothesis is true because no black swans were observed.
- d) Test the hypothesis by asking the local community what they think about swan color.

Q9. [Multiple Choice] · Cognitive Domain: Analysis

A criminologist interviews one person who committed a crime and bases their conclusions about criminal behavior on that single interview. Is this an acceptable approach?

- a) No, it incorrectly assumes that the individual's response can be generalized to the entire population. ✓ correct**
- b) Yes, the information can be assumed to be reliable because it was obtained directly from the offender.
- c) Yes, it makes it possible to more quickly draw conclusions without needing to survey more offenders.
- d) No, it is based on statistical analysis, which may introduce bias.

Q10. [Multiple Choice] · Cognitive Domain: Application

In a study about crime rates, a researcher collects data but uses improper statistical techniques for analysis. According to the principle of "Garbage in, garbage out," what is the most likely outcome of this study?

- a) The study will still yield accurate conclusions due to the volume of data collected.
- b) The results may be unreliable because the incorrect analysis technique was applied. ✓ correct**
- c) The data can be salvaged by reapplying different statistical methods later on.
- d) The results will be valid, but only for the specific sample used.

Q11. [Multiple Choice] · Cognitive Domain: Application

A researcher is studying the relationship between gender and crime. They select a sample that is 15% male. The population is 50% male. Why is this sample problematic for drawing conclusions?

- a) It is too small to yield any conclusions.
- b) It suggests that more males need to be excluded from the sample for accuracy.
- c) It will only affect the reliability of the data but not the validity.
- d) It is not representative of the population, leading to potentially biased results. ✓ correct**

Q12. [Multiple Choice] · Cognitive Domain: Application

A researcher conducts a study on a correctional treatment program that reduces recidivism among adult offenders. Based on the principles of replication in science, what is the correct next step?

- a) Apply the program to juveniles who have been charged as adults.
- b) Apply the program to juveniles and adjust the methods later if it doesn't work.
- c) Replicate the study with a juvenile population to test if the program is effective for them. ✓ correct**
- d) Assume the program will work for juveniles since it worked for adults.

Q13. [Multiple Choice] · Cognitive Domain: Application

A researcher is testing whether new sentencing guidelines that limit judges' discretion increase discretion for prosecutors. This is an example of _____.

- a) a replication study
- b) descriptive research
- c) falsification
- d) evaluation research ✓ correct**

Q14. [Multiple Choice] · Cognitive Domain: Application

Norris (2024) conducted a study to explore the potential impact of the Black Lives Matter (BLM) movement on homicides of police officers. Which type of research best describes this study?

- a) exploratory research ✓ correct**
- b) evaluation research
- c) theory testing
- d) descriptive research

Q15. [Multiple Choice] · Cognitive Domain: Comprehension

GIGO, an acronym commonly used in both computer science and the discipline of statistics, is used to represent what phrase?

- a) Gig In Gig Out
- b) Going In Going Out
- c) Gang In Gang Out
- d) Garbage In Garbage Out ✓ correct**

Q16. [Multiple Choice] · Cognitive Domain: Comprehension

Research that does not set out to test a theory or explore a new area of research but proposes to simply report characteristics or aspects of a given phenomenon is referred to as _____ research.

- a) evaluation
- b) descriptive ✓ correct**
- c) expository
- d) inferential

Q17. [Multiple Choice] · Cognitive Domain: Knowledge

A sampling technique in which all people, objects, or areas included within a population have an equal and known chance of being selected for inclusion into a sample is known as _____.

- a) purposive sampling
- b) snowball sampling
- c) probability sampling ✓ correct**
- d) multistage cluster sampling

Q18. [Multiple Choice] · Cognitive Domain: Knowledge

Which of the following are commonly used statistical packages in the criminal justice sciences?

- a) SPSS, STATA, SAS ✓ correct
- b) Numbers, Microsoft Excel
- c) Run, SigmaPlot, Do, ESRI
- d) ADMB, CJestat, DataPlot

Q19. [Multiple Choice] · Cognitive Domain: Knowledge

If data are collected improperly or carelessly, can they be salvaged?

- a) No, improperly collected data cannot be salvaged by high-powered statistical operations. ✓ correct
- b) Yes, the best method to salvage bad data is through data mining.
- c) Yes, negative binomial regression can render even the worst data useful.
- d) Yes, data imputation can solve most problems associated with bad or “dirty” data.

Q20. [Multiple Choice] · Cognitive Domain: Application

A criminologist wants to study public attitudes toward police accountability in a large city. They use simple random sampling to select 1,000 residents from the city's voter registration list, ensuring that every individual has an equal chance of being chosen. Which concept is highlighted in this scenario?

- a) regression
- b) falsification
- c) replication
- d) probability sampling ✓ correct

Q21. [Multiple Choice] · Cognitive Domain: Comprehension

With the exception of purely descriptive research, the ultimate goal in most statistical analyses is to generalize _____.

- a) a hypothesis
- b) from a population to a sample
- c) from a sample to a population ✓ correct
- d) a theory

Q22. [Multiple Choice] · Cognitive Domain: Comprehension

Nonscientific information includes information collected _____.

- a) formally using data
- b) with careful methodology
- c) anecdotally ✓ correct
- d) from previous empirical studies

Q23. [Multiple Choice] · Cognitive Domain: Comprehension

A researcher studying crime rates ignores reports of decreasing crime in some areas because they believe crime is generally increasing. This researcher's actions are an example of _____.

- a) reliable analysis; ignoring outliers can strengthen conclusions
- b) falsification; they are actively manipulating the data
- c) proper research methods; they are focusing on the majority of data points.
- d) confirmation bias; they are only looking for data that supports their beliefs ✓ correct

Q24. [Multiple Choice] · Cognitive Domain: Knowledge

Everybody who conducts a study bears an obligation to _____.

- a) provide brief outlines on the procedures used
- b) conform to at least some of the proper scientific methods
- c) use inferential statistics
- d) **be very clear and open about the methods they used ✓ correct**

Q25. [Multiple Choice] · Cognitive Domain: Knowledge

Studies using _____ statistical analyses do not contribute to theory and research or to policy.

- a) scientific
- b) rigorous
- c) **flawed ✓ correct**
- d) empirical

Q26. [Multiple Choice] · Cognitive Domain: Comprehension

_____ are small pieces of theories.

- a) Studies
- b) **Hypotheses ✓ correct**
- c) Laws
- d) Anecdotes

Q27. [Multiple Choice] · Cognitive Domain: Application

A researcher collects data on juvenile delinquency by interviewing 30% of the boys from one high-crime neighborhood. Why would this data be considered unreliable for drawing general conclusions about juvenile crime?

- a) The researcher used interviews, which are not a scientific method.
- b) **The sample is not representative of the general population of juvenile offenders. ✓ correct**
- c) The sample size is too small, even if the boys come from a relevant neighborhood.
- d) Juvenile crime cannot be analyzed through interviews alone.

Q28. [Multiple Choice] · Cognitive Domain: Knowledge

Which software package is best for extremely large data sets?

- a) SPSS
- b) **SAS ✓ correct**
- c) Stata
- d) Excel

Q29. [Multiple Choice] · Cognitive Domain: Knowledge

Which software package is known for its simplicity and ease of use?

- a) **SPSS ✓ correct**
- b) SAS
- c) Stata
- d) JMP

Q30. [Multiple Choice] · Cognitive Domain: Knowledge

_____ is excellent for regression modeling.

- a) SPSS
- b) SAS
- c) **Stata ✓ correct**
- d) JMP

Q31. [Multiple Choice] · Cognitive Domain: Application

A study is conducted using a sample that is 70% female. The population being studied is 50% female. What is the likely issue with this research?

- a) The sample is not representative, which could lead to biased results. ✓ correct**
- b) The results will be more reliable since the sample is skewed toward one gender.
- c) The conclusions can still be valid as long as the sample size is large enough.
- d) This difference is irrelevant as long as the data is statistically analyzed correctly.

Q32. [Multiple Choice] · Cognitive Domain: Knowledge

Statistics are _____ in that many of the concepts you learn at the beginning form the building blocks for more complex techniques.

- a) repetitive
- b) abstract
- c) cumulative ✓ correct**
- d) simple

Q33. [Multiple Choice] · Cognitive Domain: Comprehension

_____ is the key to learning statistics.

- a) Repetition ✓ correct**
- b) Adding and subtracting
- c) Multiplying
- d) The right software

Q34. [Multiple Choice] · Cognitive Domain: Comprehension

_____ are smaller than populations.

- a) Studies
- b) Samples ✓ correct**
- c) Parameters
- d) Theories

Q35. [Multiple Choice] · Cognitive Domain: Comprehension

Because of the limited statistical functions, _____ is considered a viable option only when only basic descriptive analyses are needed.

- a) Microsoft Excel ✓ correct**
- b) SAS
- c) Stata
- d) SPSS

True/False (20)

Q36. [True/False] · Cognitive Domain: Comprehension

Before a theory can be considered valid, it is first necessary that the hypothesis upon which it is built holds true.

- a) True ✓ correct**
- b) False

Correct answer: True

Q37. [True/False] · Cognitive Domain: Comprehension

A key aspect of scientific research is replication, conducted for purposes of determining whether the original study's results are reproduced when different samples are used.

a) True ✓ correct

b) False

Correct answer: True

Q38. [True/False] · Cognitive Domain: Comprehension

According to the scientific method, it is vital to the integrity of a discipline that a researcher not disclose the methods, samples, and techniques used in the analysis of data within any particular study.

a) True

b) False ✓ correct

Correct answer: False

Q39. [True/False] · Cognitive Domain: Comprehension

Evaluation research is rarely conducted within the fields of criminal justice or criminology due to its inherent tendency to produce unreliable and often invalid results.

a) True

b) False ✓ correct

Correct answer: False

Q40. [True/False] · Cognitive Domain: Comprehension

Research conducted by social scientists treading into unfamiliar territory when there is limited knowledge regarding a certain phenomenon is referred to as exploratory research.

a) True ✓ correct

b) False

Correct answer: True

Q41. [True/False] · Cognitive Domain: Comprehension

In most statistical analyses, the underlying purpose is to generalize from a population to a sample in order to provide the social science community with the best fitting data and results.

a) True

b) False ✓ correct

Correct answer: False

Q42. [True/False] · Cognitive Domain: Comprehension

The most highly prized statistical package used by researchers in the social sciences is Microsoft Excel due to its ability to perform high powered analytic procedures quickly and efficiently.

a) True

b) False ✓ correct

Correct answer: False

Q43. [True/False] · Cognitive Domain: Application

A researcher conducts open-ended interviews with police officers to explore how AI is being used in predictive policing. This is an example of evaluation research.

a) True

b) False ✓ correct

Correct answer: False

Q44. [True/False] · Cognitive Domain: Comprehension

In order to be a successful student of statistics, a strong base of knowledge in arithmetic and basic algebra is necessary.

a) True ✓ correct

b) False

Correct answer: True

Q45. [True/False] · Cognitive Domain: Comprehension

Statistical methods are the backbone of criminal justice research and enable the construction and expansion of knowledge about criminality and the criminal justice system.

a) True ✓ correct

b) False

Correct answer: True

Q46. [True/False] · Cognitive Domain: Application

If a researcher conducted a study to determine whether body-worn cameras improve the speed and accuracy of misdemeanor case processing, they would be conducting evaluation research.

a) True ✓ correct

b) False

Correct answer: True

Q47. [True/False] · Cognitive Domain: Application

Using probability sampling helps ensure that a sample drawn from a population mirrors the population's key characteristics, like race and gender.

a) True ✓ correct

b) False

Correct answer: True

Q48. [True/False] · Cognitive Domain: Comprehension

It is better to rely on the personal opinions and observations of people who have worked within the criminal justice system for a long time than on data gathered using scientific methods and analyzed with statistics.

a) True

b) False ✓ correct

Correct answer: False

Q49. [True/False] · Cognitive Domain: Knowledge

Trustworthy results are ground in methods.

a) True ✓ correct

b) False

Correct answer: True

Q50. [True/False] · Cognitive Domain: Comprehension

A hypothesis must hold true in order for the theory itself to be considered valid.

a) True ✓ correct

b) False

Correct answer: True

Q51. [True/False] · Cognitive Domain: Comprehension

Exploratory research occurs when there is limited knowledge about a certain phenomenon and researchers embark into unfamiliar territory as they attempt to study this social event.

a) True ✓ correct

b) False

Correct answer: True

Q52. [True/False] · Cognitive Domain: Application

A criminologist conducting exploratory research should expect to have clear expectations of what the findings will reveal before starting the study.

a) True

b) False ✓ correct

Correct answer: False

Q53. [True/False] · Cognitive Domain: Comprehension

Replication is repetition of a particular study that is conducted for purposes of determining whether the original study's results remain true when new samples or measures are employed.

a) True ✓ correct

b) False

Correct answer: True

Q54. [True/False] · Cognitive Domain: Analysis

A researcher studying the effectiveness of harsher sentencing believes that longer prison terms reduce crime. While doing research, they select studies that support their belief as well as studies that contradict it. This is an example of how confirmation bias can affect research.

a) True

b) False ✓ correct

Correct answer: False

Q55. [True/False] · Cognitive Domain: Comprehension

Theories are proposed explanations for certain events.

a) True ✓ correct

b) False

Correct answer: True

Essay (5)

Q56. [Essay] · Cognitive Domain: Application

You are a criminologist tasked with conducting a study to test the hypothesis that lower socioeconomic status is strongly correlated with higher rates of delinquency. After collecting your data, you notice that the results don't align with your initial hypothesis. Some of your colleagues suggest adjusting the data or excluding certain outliers to support your hypothesis. Explain how you would handle this situation using ethical research practices. Discuss the concept of falsification in scientific inquiry and how it applies to your decision. Finally, describe the potential consequences of manipulating the data for the field of criminology and policy development.

Suggested answer: Sample response: In this situation, I would refrain from adjusting or excluding data to fit my hypothesis, as this would violate ethical research standards. Science is grounded in the concept of falsification, which means that I should be looking for evidence that disproves my hypothesis rather than trying to confirm it. If my data don't support the hypothesis, I must acknowledge that and present the results as they are. By manipulating the data, I would not only be falsifying the results but also undermining the integrity of the study. This could lead to incorrect conclusions being drawn about juvenile delinquency, which could, in turn, result in ineffective or harmful policies. In criminology, where research often informs policies that affect individuals and communities, it is especially important that the data be accurate and reliable. Misleading results could perpetuate stereotypes or misallocate resources, further harming vulnerable populations.

Q57. [Essay] · Cognitive Domain: Application

Explain briefly why replication is vital to scientific inquiry. Include in your answer an explanation of the role that clarity and transparency of methods plays in replication.

Suggested answer: Sample response: Because scientific studies within the social sciences never actually prove anything, a good amount of additional study is necessary to provide ample evidence that results obtained are generalizable, valid, and reliable. Firm conclusions can only be drawn once subsequent studies have verified results obtained in previous research endeavors. Full replication of scientific studies is possible through the scientific method's requirement that researchers fully divulge the methods and procedures used in their studies.

Q58. [Essay] · Cognitive Domain: Comprehension

What are the differences between theories and hypotheses?

Suggested answer: Sample response: A theory is defined as a set of proposed and testable explanations about reality that is bound together by logic and evidence. A hypothesis is defined as a single proposition deduced from a theory that must hold true in order for the theory itself to be considered valid.

Q59. [Essay] · Cognitive Domain: Analysis

What is the relationship between science and methods?

Suggested answer: Sample response: Science is the systematic process of gathering, analyzing, and interpreting data to develop knowledge about the world. It relies on the collection of reliable, accurate information through methods that are carefully designed and accepted by the broader scientific community. This process is crucial to ensuring that scientific inquiry is objective, reproducible, and valid. Methods, on the other hand, are the specific procedures and techniques used to collect and analyze this data. These methods can vary depending on the scientific discipline, but they must adhere to standards that ensure the data is collected in a controlled, unbiased, and consistent manner. The relationship between science and methods is essential because scientific inquiry cannot exist without reliable methods to gather and analyze data. Methods provide the structure that allows scientists to test hypotheses, make observations, and draw conclusions based on evidence. If improper methods are used, the data collected may be unreliable, leading to flawed conclusions and undermining the credibility of the scientific process.

Q60. [Essay] · Cognitive Domain: Application

Explain the four primary types of research discussed in this chapter, and analyze how each contributes to understanding crime and justice. Provide a real-world example of how a criminal justice researcher might apply each type to address a specific issue in the field.

Suggested answer: *Sample response: The four types of research discussed in this chapter are hypothesis testing, evaluation research, exploratory research, and descriptive research. Hypothesis testing involves making specific, testable predictions about relationships between variables and then conducting research to determine whether there is evidence to support or reject the hypothesis. This type of research is common in criminal justice for examining cause-and-effect relationships, such as how a policy impacts crime rates. Evaluation research focuses on assessing the effectiveness of programs or policies. This type is critical for determining whether initiatives, like rehabilitation programs or policing strategies, are achieving their goals and providing evidence for improving policies. Exploratory research is used when little is known about a particular issue, helping researchers gather preliminary information that can lead to future study. Often qualitative, this type helps criminologists investigate new trends or understudied areas. Descriptive research, on the other hand, aims to provide an accurate and detailed picture of a phenomenon, such as crime rates or offender demographics. It focuses on answering "what" and "how" questions without delving into causality, serving as a foundation for further research or analysis. Each research type plays a unique role in building knowledge in the fields of criminal justice and criminology.*