

Guideline Quizzes for Module 4

Question 1

1 point

The primary purpose of an experiment is to:

Choose at least one correct answer

☐ (A) Observe natural phenomena

☒ (B) Establish cause-and-effect relationships

Correct answer

☐ (C) Collect data without intervention

☐ (D) Describe a population

Question 2

1 point

In an experiment, the variable that is manipulated by the researcher is called the:

Choose at least one correct answer

☐ (A) Dependent/response variable

☒ (B) Independent/treatment variable

Correct answer

☐ (C) Control variable

☐ (D) Confounding variable

Question 3

1 point

Observational studies can prove causation.

☐ (A) True

☒ (B) False

Correct answer

Question 4

1 point

Which of the following is a weakness of observational studies?

Choose at least one correct answer

- ☐ (A) They can prove causation.
- ☐ (B) They are less prone to confounding variables.
- ☐ (C) They can be used to study rare events or diseases.
- ☒ (D) They are less expensive and time-consuming than experiments.

Correct answer

Question 5

1 point

Which of the following is a weakness of observational studies?

Choose at least one correct answer

- ☐ (A) They cannot be used to study large populations.
- ☐ (B) They are difficult to replicate.
- ☐ (C) They cannot be used to study human behavior.
- ☒ (D) They are subject to selection bias.

Correct answer

Question 6

1 point

Which of the following is a way to minimize bias in observational studies?

Choose at least one correct answer

- ☐ (A) Using a convenience sample.
- ☐ (B) Relying on self-reported data.
- ☒ (C) Carefully defining and measuring variables.
- ☐ (D) Ignoring potential confounding variables.

Correct answer

Question 7

1 point

Bias can completely invalidate the findings of an observational study.

☐ A True

☒ B False

Correct answer

Question 8

1 point

It is impossible to eliminate all bias from observational studies.

☐ A True

☒ B False

Correct answer

Question 9

1 point

The main advantage of observational studies over experiments is that they:

Choose at least one correct answer

☐ A Can prove causation.

☐ B Are less prone to ethical concerns.

☒ C Can be used to study variables that cannot be manipulated.

Correct answer

☐ D Have higher internal validity.

Question 10

1 point

Which of the following is NOT a type of bias in observational studies?

Choose at least one correct answer

☐ A Selection bias

☐ B Information bias

☐ C Confounding bias

☒ D Randomization bias

Correct answer