

## 16.E: Research Design (Exercises)

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### General Questions

Q1

To be a scientific theory, the theory must be potentially \_\_\_\_\_.

Q2

What is the difference between a faith-based explanation and a scientific explanation?

Q3

What does it mean for a theory to be parsimonious?

Q4

Define reliability in terms of parallel forms.

Q5

Define true score.

Q6

What is the reliability if the true score variance is 80 and the test score variance is 100?

Q7

What statistic relates to how close a score on one test will be to a score on a parallel form?

Q8

What is the effect of test length on the reliability of a test?

Q9

Distinguish between predictive validity and construct validity.

Q10

What is the theoretical maximum correlation of a test with a criterion if the test has a reliability of 0.81?

Q11

An experiment solicits subjects to participate in a highly stressful experiment. What type of sampling bias is likely to occur?

Q12

Give an example of survivorship bias not presented in this text.

Q13

Distinguish "between-subject" variables from "within-subjects" variables.

Q14

Of the variables "gender" and "trials," which is likely to be a between-subjects variable and which a within-subjects variable?

Q15

Define interaction.

Q16

What is counterbalancing used for?

Q17

How does randomization deal with the problem of pre-existing differences between groups?

Q18

Give an example of the "third variable problem" other than those in this text.

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