

ISS 305:002
Evaluating Evidence:
Becoming a Smart Research Consumer

5. Problems of measurement

Reminder: Turn on your I<CLICKER

ISS 305: Mini-quiz Question 1

We asserted that numbers are preferable to words in summarizing our observations? Which of the following is **NOT** among the reasons why?

- A. numbers have a more precise meaning
- B. numbers can express feelings better than words
- C. numbers have a more widely shared meaning
- D. numbers can be combined mathematically to summarize our observations

ISS 305: Mini-quiz Question 2

If I use Grade Point Average to measure the variable of intelligence, I'm measuring at the _____ level of measurement. (Assume a 4.0 scale where the lowest grade is 0.0 and the highest is 4.0. Also, assume that everyone completed at least one exam and the lowest grade was a 2.0%.)

- A. nominal
- B. ordinal
- C. interval
- D. ratio

ISS 305: Mini-quiz Question 3

The first three digits of your social security number (SSN) refers to the geographical area in which the number was issued. Therefore, the first three digits of your SSN are best thought of as a(n) _____ score.

- A. nominal
- B. ordinal
- C. interval
- D. ratio

ISS 305: Mini-quiz Question 4

Temperature (Kelvin not included. Stupid Kelvin!) falls under what kind of scale of measurement?

- A. nominal
- B. ordinal
- C. interval
- D. ratio

ISS 305: Mini-quiz Question 5

All of the following are considered constructs, except:

- A) Intelligence
- B) Motivation
- C) Love
- D) Fear
- E) All of the above are considered constructs.

ISS 305: Mini-quiz Question 6

The bogus pipeline was used on a group of participants. Compared to control participants (who just answered the survey) the participants in the bogus pipeline condition reported that they drove drunk _____

- A. more often.
- B. less often.
- C. at the same rate.

ISS 305: Mini-quiz Question 7

In judging which boxer wins a bout, unless there is a clear and obvious winner, Umpire Fred simply tosses a coin to determine a winner. This clearly suggests that his measurement of boxing ability has

- A. high validity
- B. low reliability
- C. high reliability
- D. Both A and C are correct.

ISS 305: Mini-quiz Question 8

Ben decides to measure racial tensions at MSU using the following simple question:

"I dislike students who are not of the same race as me."

strongly disagree(1) (2) (3) (4) (5)strongly agree

Student responses lead him to conclude that there is practically no racial prejudice at MSU. But suppose that racists choose not to admit their racist attitudes (for example, to avoid looking "politically incorrect"). This would create a problem of

- A. low level of measurement.
- B. low reliability of measurement.
- C. low validity of measurement.
- D. low empiricism.

ISS 305: Mini-quiz Question 9

A measure which has high reliability

- A. will have low validity.
- B. may have low or high validity.
- C. will have high validity.

ISS 305: Mini-quiz Question 10

You are interested in using a questionnaire measure of extraversion and you want to know if it has good internal reliability. Which of the following can you use to calculate this?

- A) Calculate the correlation between the mean score from the odd items and the mean score from the even items
- B) Compute Cronbach's alpha
- C) Both A & B
- D) Neither A nor B

ISS 305: Mini-quiz Question 11

_____ refers to the degree to which your measure is measuring what you want it to, whereas _____ refers to how precise your measurement is.

- A) Reliability; validity
- B) Validity; reliability
- C) Measurement error; validity
- D) Validity; Measurement error

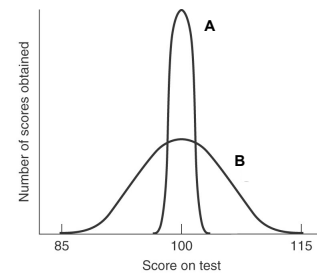
ISS 305: Mini-quiz Question 12

Using height as an index of depression would be:

- A) Both reliable and valid
- B) Neither reliable nor valid
- C) Reliable but not valid
- D) Valid but not reliable

ISS 305: Mini-quiz Question 13

A and B are distributions of scores on an IQ test obtained by one person, administering each test multiple times. This person's true score is 100. Which measure yields a more reliable score?



- A) A
- B) B

ISS 305: Mini-quiz Question 14

Measures that are high in _____ reliability will yield similar scores if you give the measure on multiple occasions.

- A) Inter-rater/judge
- B) Internal
- C) Test-retest

ISS 305: Mini-quiz Question 15

You and your friend are working in a research lab and you are asked to watch videos of a couple interacting and rate the quality of their interaction on a scale of 1-10. You each rate 20 couples and compute the correlation between your ratings and your friend's ratings. You obtain a correlation coefficient (r) of 0.01. This means that you have:

- A) High inter-rater reliability
- B) Low inter-rater reliability
- C) High test-retest reliability
- D) Low test-retest reliability

ISS 305: Mini-quiz Question 16

Out of the following, which is the BEST way of establishing measurement validity.

- A. Convergent validity
- B. Face Validity
- C. Consensual Validity
- D. Validity by assertion

ISS 305: Mini-quiz Question 17

Dr. Weaver is asked to rate all of his students on classroom etiquette. His ratings correlated highly with the ratings made by his TAs. This indicates a high level of _____ for the classroom etiquette measure.

- A. test-retest reliability
- B. convergent validity
- C. Concurrent validity
- D. Interjudge reliability

ISS 305: Mini-quiz Question 18

An employer gives a test to all job candidates for a sales position before they are hired. The score on this test is highly correlated with their sales at the end of their first year. This test has high:

- A) Concurrent validity
- B) Predictive validity
- C) Criterion validity
- D) B and C
- E) All of the above

ISS 305: Mini-quiz Question 19

True or False: In a questionnaire measure of depression, the question 'I feel sad most of the time' has high face validity.

- A) True
- B) False