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

7. Establishing Associations / Relationships

Reminder: Turn on your I<CLICKER

ISS 305: Mini-quiz Question 1

What is the minimum amount of variables it takes to establish a relationship?

A. none
B. one
C. two
D. 1 billion + 7 - 12

ISS 305: Mini-quiz Question 2

Which of the following does NOT state a relationship, as we have defined it?

A. coffee drinkers who miss their morning coffee are more likely to suffer headaches
B. students with higher high school GPAs tend to have higher college GPAs
C. the average height of people in Michigan is 5'10", and the standard deviation is 27"
D. men are more aggressive than women

ISS 305: Mini-quiz Question 3

The absence or lack of a relationship means as one goes up (or down), the other stays the same.

A. True
B. False

ISS 305: Mini-quiz Question 4

Does the contingency table to the right show a relationship between taking Vitamin C and catching a cold?

A. no
B. yes, a positive one (taking Vitamin C increases your chances of having a cold)
C. yes, a negative one (taking Vitamin C decreases your chances of having a cold)

Variable A: Catch a Cold?	Variable B Take Vitamin C?		Variable A totals
	Yes	No	
Yes	7	3	10
No	14	6	20
Variable B totals	21	9	30

Variable A: Catch a Cold?	Variable B Take Vitamin C?		Variable A totals
	Yes	No	
Yes	7	3	10
	70.00%	30.00%	
No	14	6	20
	70.00%	30.00%	
Variable B totals	21	9	30

ISS 305: Mini-quiz Question 5

Does the contingency table to the right show a relationship between taking Vitamin C and catching a cold?

A. no
B. yes, a positive one (taking Vitamin C increases your chances of having a cold)
C. yes, a negative one (taking Vitamin C decreases your chances of having a cold)

Variable A: Catch a Cold?	Variable B Take Vitamin C?		Variable A totals
	Yes	No	
Yes	7	3	10
No	17	3	20
Variable B totals	24	6	30

Variable A: Catch a Cold?	Variable B Take Vitamin C?		Variable A totals
	Yes	No	
Yes	7	3	10
	70.00%	30.00%	
No	17	3	20
	85.00%	15.00%	
Variable B totals	24	6	30

ISS 305: Mini-quiz Question 6

Does the contingency table to the right show a relationship between taking Vitamin C and catching a cold (if a cell is blank, it means there is no data available in that cell)?

A. no
B. yes, a positive one (taking Vitamin C increases your chances of having a cold)
C. yes, a negative one (taking Vitamin C decreases your chances of having a cold)
D. there's not enough data available to tell.

Variable A: Catch a Cold?	Variable B Take Vitamin C?	
	Yes	No
Yes		
No	12	

ISS 305: Mini-quiz Question 7

Does the contingency table to the right show a relationship between taking Vitamin C and catching a cold?

A. it shows that there is no relationship
B. yes, a perfect positive one (taking Vitamin C guarantees you will have a cold)
C. yes, a perfect negative one (taking Vitamin C guarantees you won't have a cold)

Variable A: Catch a Cold?	Variable B Take Vitamin C?		Variable A totals
	Yes	No	
Yes	0	6	6
No	12	0	12
Variable B totals	12	6	18

ISS 305: Mini-quiz Question 8

Which of the following is true?

A. All relationships are perfect relationships.
B. All relationships are causal relationships.
C. None of the above are true.

ISS 305: Mini-quiz Question 9

The ***biggest (most fatal)*** problem in relying on testimonial evidence is that

A. most people giving testimonial evidence are making it up to get attention
B. testimonial evidence only provides information about one cell of a contingency table
C. it is likely that the people giving such testimonials are paid to endorse a product
D. most advertisers are making up the testimonial evidence they present

ISS 305: Mini-quiz Question 10

Your instructor would argue that the **biggest** problem in using personal experience as evidence to establish a relationship is that

A. our own experience may not be typical of most others'.
B. personal experience may only provide information about one cell of a contingency table.
C. we are biased in our perception and recall of our own experience.
D. experience is personal, not public, and hence, cannot provide useful evidence

ISS 305: Mini-quiz Question 11

Historian Daniel B. Shortstack argues that there is no positive relationship between height and being accepted as a leader. His primary evidence is the fact that Napoleon and Hitler, both very well accepted leaders, were short (Napoleon was 5' 6½"; Hitler was 5'9" tall). What's wrong with his argument?

A. Both leaders were actually much taller, but their political enemies spread false rumors that they were shorter.
B. You cannot disprove a rule with isolated exceptions.
C. Shortstack needs more examples of short, accepted leaders to make his argument conclusive.
D. Nothing is wrong with his argument.

ISS 305: Mini-quiz Question 12

We seem to make the single cell error because

A. most of the time, information from a single cell is adequate to establish a relationship.
B. in our evolutionary history, all relationships were perfect ones.
C. we falsely assume that all relationships must be perfect ones.
D. we assume too high a rate of spontaneous remission.

ISS 305: Mini-quiz Question 13

We tend to pay more attention to single cell evidence which is _____ than evidence that is _____.

A. vivid; pallid
B. unusual; common
C. easily recalled; hard to recall
D. all of the above

ISS 305: Mini-quiz Question 14

Walk Through

If Hamilton & Gifford (1976) had examined rare good events (e.g., donating blood) instead of rare bad events (committing a crime), the principle of paired distinctiveness would predict that

A. minority group members would be seen as being less good (e.g., less likely to donate blood)
B. there would be no association between group membership and doing the good thing
C. minority group members would be seen as being more good (e.g., more likely to donate blood)
D. good events would be seen as rarer than bad events.

ISS 305: Mini-quiz Question 15

The reason you're more likely to make the "person who" error when you're the "person who" has some experience is because

A. we tend to have a poor grasp of probability of chance events.
B. such personal experiences are more vivid and noticeable to us.
C. you can trust the accuracy of your own experience more than the experience of others.
D. we lose all critical thinking ability when our own fate is involved.

ISS 305: Mini-quiz Question 16

Suppose an average person (NOT an ISS 305:001 student) is asked, "Will skipping a workout the day before a match make it more likely that you'll lose that match?" Which information in the table below will that person think is ***most*** informative to answer the question?

A. a
B. b
C. c
D. d

Variable A: Work out day before match?	Variable B: Win the match?	
	Yes	No
Yes	a	b
No	c	d

ISS 305: Mini-quiz Question 17

Which of the following individual differences has NOT been shown to affect making the single-cell error?

A. age
B. sex
C. depression
D. need for cognition

ISS 305: Mini-quiz Question 18

A salesman says "This ointment will cure your acne because _____." He's counting on you making the single row/column error.

A. my kid used it and has no acne
B. 6 out of 7 kids who use it have no acne
C. out of 100 kids, 50 who used the ointment and 50 who didn't, there were 37 kids who had acne

ISS 305: Mini-quiz Question 19

Restrictions of range and floor/ceiling effects can lead us to

A. conclude there is no relationship when there actually may be one
B. conclude that there is a relationship when there actually is no relationship
C. conclude that there's a perfect relationship when the relationship is really imperfect
D. conclude that the variables in question are being measured with greater validity than they really are.

ISS 305: Mini-quiz Question 20

Bob says, "I don't believe that you can prevent catching colds by washing your hands a lot. Apparently, 10% of Americans wash their hands at least 4 times a day, but only 2% of Americans never get colds." Bob is committing the _____ error.

A. single cell
B. single row/column
C. diagonal
D. marginals

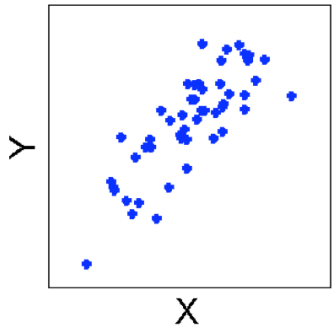
ISS 305: Mini-quiz Question 21

Under which of the following conditions is a person likely to see the largest correlation between A & B?

A. when the person doesn't expect them to be correlated, but they really are
B. when the person doesn't expect them to be correlated, and they really aren't
C. when the person does expect them to be correlated, and they really are
D. when the person does expect them to be correlated, but they really aren't

ISS 305: Mini-quiz Question 22

A) r = +.81
B) r = -.81
C) r = 0.00
D) r = -1.0



ISS 305: Mini-quiz Question 23

Andy wants to determine if there is a relationship between wearing a tie to a job interview and getting the job. He asks 100 people if they wore a tie to their last interview and if they got the job. He finds that 50 people who wore a tie also got the job. If he concluded on the basis of this information that there was a relationship, he would be making

A. a main diagonal error.
B. a single cell error.
C. a single column error.
D. a man-who error.
E. a correct conclusion.

ISS 305: Mini-quiz Question 24

Andy wants to determine if there is a relationship between wearing a tie to a job interview and getting the job. He asks 100 people if they wore a tie to their last interview and if they got the job. He finds that 50 people who wore a tie also got the job. If he concluded on the basis of this information that there was a relationship, he would be making

A. a main diagonal error.
B. a single cell error.
C. a single column error.
D. a man-who error.
E. a correct conclusion.

ISS 305: Mini-quiz Question 25

What conclusion can you draw about the relationship between Variable A and Variable B in the following contingency table?

A. There is no relationship.
B. There is a perfect relationship.
C. There is an imperfect relationship.
D. It is not possible to tell whether there's a relationship.

Variable A: Take Vitamin C?	Variable B: Get a cold?	
	Yes	No
Yes	100	25
No	125	0

ISS 305: Mini-quiz Question 26

Several researchers now believe they have found a link between hostility and poor health later in life. A study on 120 Ps found that 40 Ps who were rated high on hostility had later health problems. They also found that 20 Ps low in hostility had later health problems, while 60 Ps rated low in hostility experienced no health problems. Assuming these figures are accurate, what can be determined about the relationship between hostility and later health problems?

A. No relationship exists.
B. A perfect relationship exists.
C. A negative relationship exists (greater hostility implies better health).
D. A positive relationship exists (greater hostility implies poorer health)
E. Not enough information is provided to determine if a relationship exists.