First Name:_____ Last Name:_____

Student ID #: _____

PSC 041 Research Methods in Psychology WQ 2023

Unit 2 Exam Version A

Research Summary

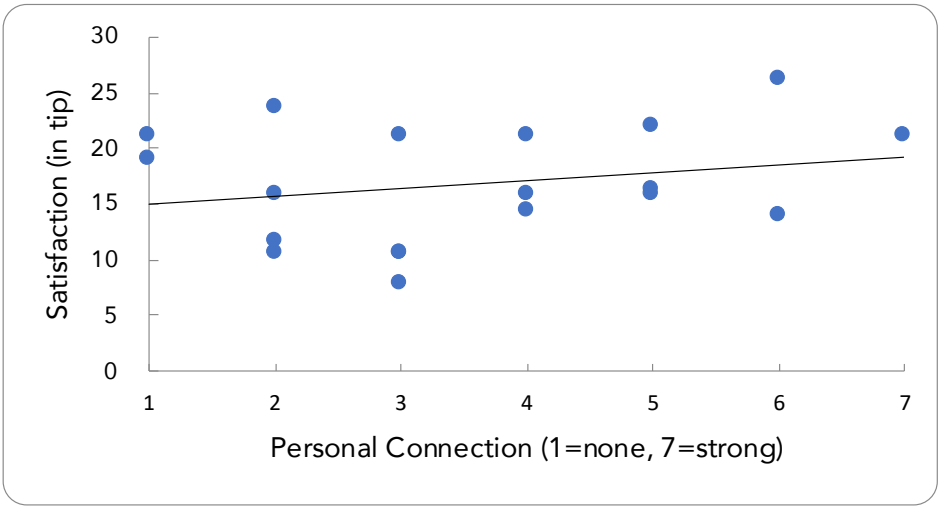
Please answer the following questions in the space provided. Only write on the lines.

Adapted from: Strohmetz, D. & Rind, B. (1999). Effect on restaurant tipping of a helpful message written on the back of customers' checks. *Journal of Applied Psychology, 29*, 139-144.

In the US, where restaurant servers rely on tipping as a main source of income, can giving a customer a simple "thank you" really pay off? Researchers wanted to find out if servers making a personal connection could influence a customer's satisfaction. To study this, they went to an upscale buffet restaurant where servers catered to the needs of the customers except for serving them food. Since it was buffet style, it was a set price per person and each customer chose their own food.

The researchers met with each server and described to them some examples of personal connection. They then asked each server to estimate the personal connection he, she or they had made with each group of customers on a scale of 1 (no connection at all) to 7 (very strong connection). Each server was asked to reflect on the interactions that they had engaged in with each group to inform their decision. The server recorded this personal connection number at the top of each bill before presenting the bill to the customer. The researchers collected copies of the bills and receipts every day for three weeks.

The researchers used the amount of money left as a tip as an indicator of customer satisfaction. They calculated the tip from the total meal cost and total amount paid. They subtracted the meal cost from the total amount paid and then calculated the percentage of the tip from each receipt. The results showed that the stronger the personal connection, the higher the tip percentage, $r(79) = 0.23$, $p = 0.04$.



Predictor Variable

Considering the predictor / independent variable, Personal Connection

10 pts 1. How did the researchers operationally define the predictor / independent variable? Describe it using your own words. *Be sure to include the levels or values and indicate how the codes will be interpreted.*

5 pts 2. The predictor / independent variable is (fill in the box)

- ☐ **Categorical**
- ☐ **Continuous**

5 pts 3. How was the predictor / independent variable measured? (fill in the box)

- ☐ **Observation**
- ☐ **Self-Report**
- ☐ **Physiological**
- ☐ **It was manipulated** (under the experimenter's control)

5 pts 4. Is this a causal or associative claim? (fill in the box)

- ☐ **Causal**
- ☐ **Associative**

20 pts 5. Construct Validity: This variable is vulnerable to a self-fulfilling prophecy (observer expectancy) effect. Describe what makes it vulnerable. Describe how to reduce the vulnerability.

Outcome Variable

Considering the outcome / dependent variable, Satisfaction

10 pts 6. How did the researchers operationally define the outcome / dependent variable? Describe it using your own words. *Be sure to include the levels or values and indicate how the codes will be interpreted.*

5 pts 7. The outcome / dependent variable is (fill in the box)

- ☐ **Categorical**
- ☐ **Continuous**

5 pts 8. How was the outcome / dependent variable measured? (fill in the box)

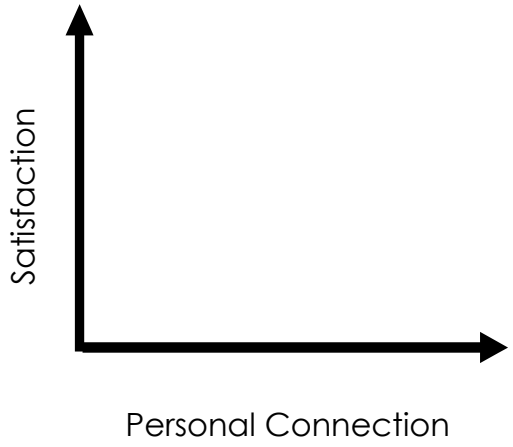
- ☐ **Observation**
- ☐ **Self-Report**
- ☐ **Physiological**
- ☐ **It was manipulated** (under the experimenter's control)

20 pts 9. Evaluate the **construct validity** of the outcome / dependent variable.
ProTips: Give an overall evaluation. Think about the face validity, the procedure, and the method-match to inform your decision. Use specific vocabulary. Be sure to only discuss this one variable.

10 pts | 10. How could the researchers establish reliability of the outcome variable?
ProTip: You can describe test-retest, alternate forms, split-half, or inter-rater.

Hypotheses
ProTip: include specific variable names and be sure to use a correct verb (causal or associative)

10 pts | 11. Sketch the null hypothesis:



10 pts | 12. Write a specific directional research hypothesis for this research.

Summarize the findings

5 pts 13. What sort of relationship did the research reveal?

- ☐ **No relationship**
- ☐ **Strong negative linear relationship**
- ☐ **Moderate negative linear relationship**
- ☐ **Weak negative linear relationship**
- ☐ **Strong positive linear relationship**
- ☐ **Moderate positive linear relationship**
- ☐ **Weak positive linear relationship**

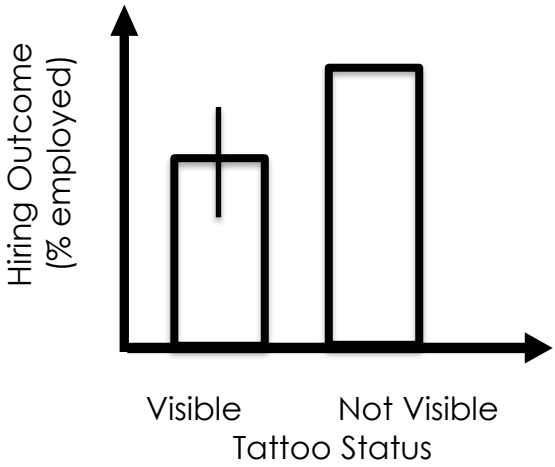
5 pts 14. The *p* value is _____ . Therefore, there ___ a statistically significant relationship between the variables. (fill in the box)

- ☐ **greater than 0.5; is**
- ☐ **greater than 0.5; is not**
- ☐ **less than 0.5; is**
- ☐ **less than 0.5; is not**
- ☐ **greater than 0.05; is**
- ☐ **greater than 0.05; is not**
- ☐ **less than 0.05; is**
- ☐ **less than 0.05; is not**

5 pts 15. Does this interpretation follow from this study: "increased personal connection caused an increase in customer satisfaction" Why or why not?

Multiple choice/ fill in the blank / short answer.
Select the single best answer. Indicate your choice by filling in the box to the left of your selection. Write short answers in the space provided.
2 points each.

16. Draw the remaining error bar on this graph such that the graph supports this claim: Having visible tattoos is not related to getting a job

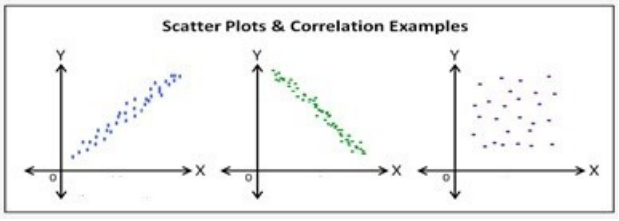


17. A correlation coefficient (r) less than -.1 means that _____.
    - ☐ as the value of one variable goes up, the other goes down
    - ☐ as the value of one variable goes up, the other also goes up

18. Which of the following tells us the strength of a correlation coefficient?
    - ☐ the sign of the r-value
    - ☐ the absolute value of the r-value

19. Which of the following values indicates a strong correlation coefficient?
    - ☐ +/- 1.00 to 1.50
    - ☐ +/- .50 to 1.00
    - ☐ +/- .30 to .50
    - ☐ +/- .10 to .30
    - ☐ 0

20. Which of the graphs below show a strong negative correlation coefficient?
    ☐ A ☐ B ☐ C



21. The finding that "shorter people have more confidence than taller people" illustrates ____ relationship.
    - ☐ a positive linear
    - ☐ a negative linear
    - ☐ a curvilinear
    - ☐ no relationship

22. Which of the following statements is an example of circular reasoning:
    - ☐ "Time was measured accurately because the two conditions took different lengths of time"
    - ☐ "Time was measured accurately because we used a stop watch"

23. You are developing a new test of Attention Span for goldfish.
    You give the currently accepted test to a goldfish, and it scores 9 seconds (average).
    You then give your new test to the same goldfish three times.
    Here are the results:
    Trial one: 3 seconds
    Trial two: 30 seconds
    Trial three: 10 seconds

    Your new Working Memory test is:
    - ☐ Neither valid nor reliable
    - ☐ Both valid and reliable
    - ☐ Valid but not reliable
    - ☐ Reliable but not valid

24. Which of the following would be the best way to measure the physiological state of anger?
    - ☐ Observing people for signs of anger
    - ☐ Newspaper articles about the level of anger among the populace
    - ☐ Self-reports by individuals about their level of anger
    - ☐ Measures of brain patterns, blood pressure, and heart rate as correlates of anger

25. A researcher included reverse-worded items in a self-report measure. How would she use reverse coding?
    - ☐ She would need to flip the coding scale so the same type of responses were coded the same way.
    - ☐ She would code all 'No' responses as 0 points and all 'Yes' responses as 1 point.
    - ☐ She would code all 'No' responses as 1 point and all 'Yes' responses as 0 points.
    - ☐ She would code all 'strongly agree' responses as 7 points and all 'strongly disagree' responses as 1 point
    - ☐ She would code all 'strongly agree' responses as 1 point and all 'strongly disagree' responses as 7 point