First Name:_____ Last Name:_____

Student ID #: _____

PSC 041 Research Methods in Psychology SS1 2022

Unit 1A Exam

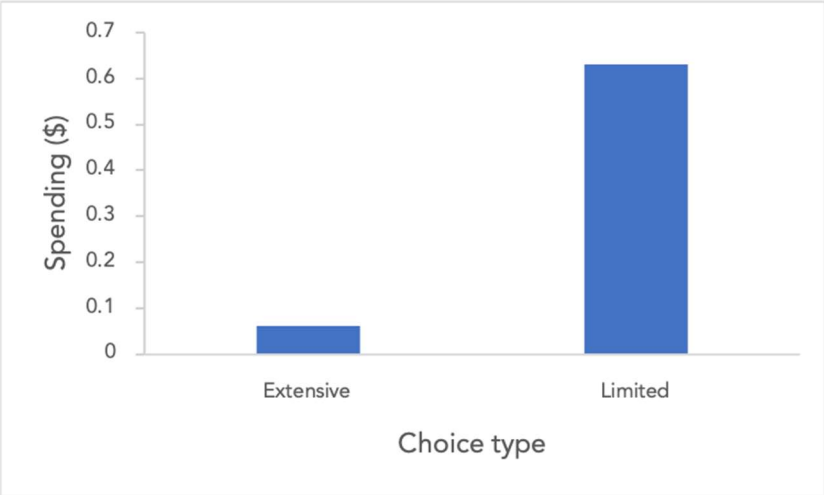
Research Summary

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

Adapted from: Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing?*Journal of Personality and Social Psychology, 79*(6), 995-1006.

Can you have too much of a good thing? Marketing analysts assume that the more choices they offer, the more likely customers will be able to find and buy just the right thing. They assume, for instance, that offering 50 styles of jeans instead of two increases the chances that shoppers will find a pair they really like. Researchers wanted to find out if the marketing analysts are right, that more choice is a good thing for sales.

It all began with jam. In 2000, psychologists Sheena Iyengar and Mark Lepper published a remarkable study. On two consecutive Saturdays, neither of which fell on a long holiday weekend, a tasting booth was set up inside a high-end grocery store for five hours during peak shopping hours. On one Saturday, shoppers saw a display table with 24 varieties of gourmet jam. On the other Saturday, shoppers saw a similar table, except that only 6 varieties of the jam were on display. The researchers decided which booth to set up on the first and second Saturday randomly by flipping a fair coin. Selection of the jam flavors to display was carefully considered; all jams were the same brand and the most common (e.g., strawberry) were not included.

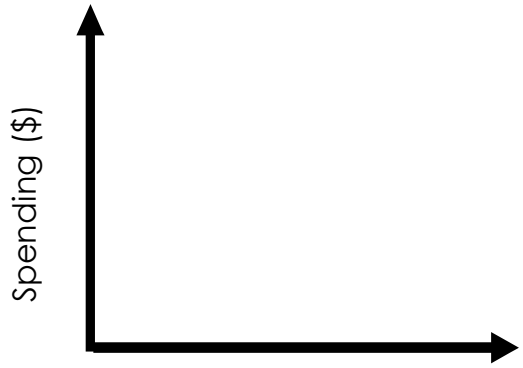


Any person who sampled the spreads received a coupon for $1 off of jam purchase. Those coupons had a code that was tracked at the register. When the time came to purchase, people who saw the large display spent about one-tenth as much on jam as people who saw the small display. The amount of choices significantly affected the amount of money spent on jams, $t(500) = 5.02$, $p = .01$. Researchers found that participants who were exposed to six jam choices spent significantly more on jam ($M = 0.63$, $SD = 1.72$) compared to those who were exposed to 24 jam choices ($M = 0.06$, $SD = 0.56$).

Hypotheses

5 pts 1. What is the null hypothesis?

5 pts 2. Sketch the null hypothesis:



5 pts 3. Write a directional research hypothesis.

5 pts 4. Write a non-directional research hypothesis.

Predictor Variable

5 pts 5. Name the predictor / independent variable

_____

_____

10 pts 6. 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 7. The predictor / independent variable is (fill in the box)

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

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

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

Outcome Variable

5 pts 9. Name the outcome / dependent variable

_____

_____

10 pts 10. 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 11. The outcome / dependent variable is (fill in the box)

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

5 pts 12. How was the outcome / dependent variable measured? (fill in the box)

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

Another researcher wants to extend this finding using different methods to address a similar research question. This researcher surveys participants by sending out a survey in the mail. They ask participants to estimate the number of jam choices at their local grocery store and how much they are willing to spend on jam.

5 pts 13. How was this new predictor/independent variable measured? (fill in the box)

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

Summarize the findings (from original prompt)

5 pts 14. Is this a value, causal, or associative claim? (fill in the box)

- ☐ **Value**
- ☐ **Causal**
- ☐ **Associative**

10 pts 15. How do you know?

_____

_____

10 pts 16. How do you know that this satisfies Mill's criteria of temporal precedence?

_____

_____

10 pts 17. Does this satisfy Mill's criteria of elimination of alternative explanations?

_____

_____

10 pts 18. Does this interpretation follow from this study: "We found that giving more jam choices was not related to the amount spent" 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.
3 points each.

19. If you question the construct validity of a study, which of the following questions would you be asking?
    - ☐ Were the variables measured accurately?
    - ☐ How well do the results generalize to the overall population?
    - ☐ Does the predictor variable cause changes in the outcome variable?
    - ☐ Which statistic should be computed?

20. Miguel Experimenter wants to know what graduate students eat at the MU. What is the best method match?
    - ☐ observation
    - ☐ survey
    - ☐ physiological measurement

21. Which of the following is a definition for external validity?
    - ☐ the degree to which a test or instrument is capable of measuring a concept, trait, or other theoretical entity
    - ☐ the degree to which a study or experiment is free from flaws and can therefore be taken to represent the true nature of the phenomenon.
    - ☐ the extent to which the results of research or testing can be generalized beyond the sample that generated them.

22. Veronica Researcher wants to know if students who workout at the arc have less anxiety during tests. What is the best method match?
    - ☐ observation
    - ☐ survey
    - ☐ physiological measurement

23. Which of the following is the best operational definition for the construct "Happy"
    - ☐ length of time (in seconds) that a person smiles during a 30-minute conversation/interaction
    - ☐ average heart rate over a 24-hour period
    - ☐ self-report of a participant's opinion about how happy they feel

24. What sort of evidence are testimonials from individuals?
    - ☐ rational
    - ☐ empirical
    - ☐ scientific
    - ☐ anecdotal

25. An important characteristic of science is that it is empirical. Which of these statements describes this characteristic?

- ☐ Scientific inquiry has value independent of any economic value that may result from the research
- ☐ All natural, social, and psychological phenomena are causally determined by preceding events or natural laws
- ☐ Science is based on objective, reproducible evidence and not on pure reason, emotion, or subjective experience
- ☐ All scientific knowledge is open to further testing and revision

26. I believe that fairies exist. I believe that fairies are very shy and that they do not show themselves to people.

Therefore, if fairies do actually exist, you won't see any fairies.
But also, If fairies do not exist, you won't see any fairies.
Because these two predictions are the same, which characteristic of science does my belief violate? Write a single word:

_____

27. A researcher wants to know how much the cost of bread changed from 1980 to 2020. What type of claim will the researcher make?
    - ☐ Value claim
    - ☐ Association / correlation claim
    - ☐ Causal claim

28. How do you know?

_____

_____

_____

_____