Homework 5

Undergraduate Research Methods in Psychology

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Table of Contents

1 Prompt

This homework involves planning statistics and plots appropriate to data gathering. While these are not a core focus of this class (as they are better covered by PSY-350), they are extremely important to research planning, and thus, it is necessary to cover them. Without these components, it is basically impossible to say we have any results at all! Also, based on your prerequisite courses, you should have some knowledge on this. If you need a refresher, please refer to Chapter 12 and Chapter 13 in your textbook.

You are working at a social research firm looking for public opinion on an upcoming new AI product coming to market soon. A recent data collection project was ran and was able to assess people's opinion on this product area with the following 3 questions:

> **Q1: Would you describe yourself as knowledgeable about AI?**
>
> *Possible answers:*
>
> Yes, No
>
> **Q2: Please indicate your agreement with the following statement:**
>
> *I am likely to buy this new product once it is available. 4 possible answers:*
>
> Strongly Disagree, Disagree, Agree, Strongly Agree
>
> **Q3: How much would you be willing to spend on this product?**
>
> *Possible answers:*
>
> 0 to ∞ dollars

But wait, no one at the firm actually planned out how they are going to analyze this new data - a gigantic blunder! While this is un-ideal, you are now asked to help figure out what appropriate numbers, statistics, and plots you can get from this data.

You should:

- For each question, describe the scale of measurement that results from the question and *why* that is the case
- Indicate at least 1 descriptive statistic and 1 inferential statistic for each measure. Please be specific in what test(s) you suggest and tell my *why* these are appropriate to this data. *Hint: you may need/want to "combine" some variables for certain tests, get creative!*
- Briefly describe what the test result from inferential statistics would tell us - i.e., what is the "real" meaning of running this test
- You **do not** need to calculate anything

2 Checklist

☐ Each question's scale of measurement is identified *and* explained

☐ Each question has 1 descriptive statistic procedure and 1 inferential statistic procedure identified. Explain in at least 2 sentences why these are appropriate to be used, given the scale of measurement

☐ In at least 2 sentences per inferential statistic, please describe what the "real" meaning of the results are. Tell me what the results would hypothetically mean, what hypothesis would be tested?