

Empirical Study 3: Statistics and Data Analysis

Due Date: Last Day of Class

In this third and final version of your paper, you will conduct the final study with a sample size requirement. Past that, you will complete the final sections in the APA JARS guidelines, which are Results and Discussion. You will also conduct a final presentation on your paper.

Conduct your Final Study

When you are ready, and recognizing that you can never know for sure, conduct the final version of your study. In this case, I expect a minimum sample size of **at least 30**, although I will make exceptions in rare cases with permission. Once complete, conduct all statistical analysis for your paper and write the final two sections in APA Jars. The results and discussion sections are difficult to get right, so you want to double check these carefully with other students or me.

Participate in Nerd Day

On nerd day, you will bring in your raw data and statistical analysis, including all charts. The purpose is to obtain feedback from other students and to make changes. Again, this is required and you either get the points or you do not. There is no magic in learning to conduct statistical analysis in practice. You really just need to do it, get feedback, and try again.

Final Project Presentation

Each student will prepare a 10 minute presentation on their final study, including methodology, data, and other aspects of JARS. The powerpoint must be submitted with your paper.

Achieve "Synthesis" in your Literature Review

Easily one of the hardest things to achieve in a literature review is synthesis. The idea is that in document 2, you wrote a selection of sentences or paragraphs with citations in latex. This lets you keep track of the references and mark what you read. You should have targeted 10-15 papers, or at least it is unusual not to.

In this one, you will essentially keep the same references but "rewrite the story from scratch." The difficult part here is that you need to really reflect on questions like the following:

1. What do you think the literature is telling you about your research topic?
2. How can you turn this collection of papers into a story that is easy to follow and understand?
3. How do these papers connect and diverge?
4. What is the evidence overall on this topic and how definitive is it?
5. Is there a consistent theory around these papers?

6. If there is a theory in these papers, does it make specific *predictions* and are those predictions *falsifiable*?

Do not be literal! I am not asking you to answer these questions in the review. I am asking you to **reflect** on these questions and really think it through. These sections must be publication quality by the end of the course and I will heavily scrutinize the work if I think this was done poorly.

Point Breakdown and Submission Instructions

The broad guideline for this experiment does not change from the initial write-up. As such, the following deliverables are now due (30 points each):

- Participate in Nerd Day
- Participate in the final project presentation and submit your powerpoint
- The APA JARS template and TOCE template is correctly filled out for all sections and the final literature review meets all criteria. The final spreadsheet must be included in your submission.
- The statistical analysis and discussion was conducted correctly, and is factually correct. This analysis must be conducted in the Quorum programming language. Statistics done in other languages will receive no points for this section
- Evaluation of the writing overall

Submit your work as one single zip file to Canvas.

Total points: 150