

# Paper analysis project

Due Sunday 8 October 2023 (18:00)

## Instructions

**You are not allowed to discuss or collaborate on any aspect of your paper analysis project with other students under any circumstances. If you do, you will fail the course.**

**If you have questions about the assignment, email them to me privately. I will share any answers I provide with the whole class.**

You should submit your report **as a PDF**. I recommend writing your report in a text editor (e.g., Word or Pages), but you could write it in RStudio if you prefer. The regular late penalties apply to this assignment, cf. the syllabus.

## Assignment

Find a news article or other piece of popular media that references a recently published scholarly study (on any subject). Don't pick an article from a research blog (e.g. the BPS research digest) or other source that already answers most of the questions below.

Next, locate the original study referenced in the news article, using e.g., Google Scholar. Use the study to answer the questions below in a 600-900 word report.

Use the subheadings below as the starting point for your submission (don't write your response as an essay without subheadings). Write complete, full-sentence answers corresponding to each subheading. Make sure your report is well-written, well-organized, neat and tidy. Good luck!

### Sources

#### News article

Where did you find the news article? Provide a URL. Was the article a short news item, in-depth article, feature story, etc.? Provide a one-sentence summary of the news article.

#### Kind of academic report

Was the academic report cited in the article from a medical/technical journal, press release, book, or other source? Provide a URL.

#### The article

#### Background

Provide the motivation and background of the academic study as described in the original report.

## Objective

What is the goal of the academic study?

## Type

- **Randomized experiment:** Treatments under the control of the experimenter and assigned randomly
- **Natural experiment:** Treatments assigned as-if-random by nature without intervention by the experimenter
- **Observational study:** Researcher collected data on the population; treatments were not randomly assigned
- **Survey study:** The authors surveyed a sample of the population to estimate parameters of interest (for example, a survey of public opinion)
- **Meta-analysis:** An examination of several earlier studies

## Study protocol

This section should include:

- The **setting** of the study (who, where, when)
- A description of the experimental **subjects or survey participants**
- The **population** to which the results are generalized
- The **response variable(s)** and **predictor variable(s)**
- How much **missing data or non-response** to the survey was observed (if a survey was used)
- If it was an experiment, a description of the **treatment** used

## Statistical methods

Include and interpret key graphs and tables as well as more formal methods such as t-tests and regressions (if the authors use an advanced statistical technique that's beyond the scope of this course, do your best to understand their results).

## Conclusions

- **Design evaluation:** Discuss strengths and weaknesses you see in the study design. Did the author(s) do anything particularly clever or novel? Are there limitations in the design that lead you to seriously doubt the conclusions the authors draw, or imply in their introduction?
- **Generalization:** Discuss the degree to which the results generalize to the real world and other (potential) problems of the academic study. How do the results relate to the rest of the scientific literature? These questions are generally addressed in the report itself but use your own thinking to examine other ways the conclusion might not be meaningful.
- **News article discussion:** Sum up the relationship between the news article and the report. Did the news article accurately summarize the report? Did the news article overstate the conclusions of the academic report? Did the newspaper article point out potential flaws in the study not noted in the academic report?
- **Additional questions:** What are some areas that you felt the author(s) of the study were unclear on? What part of their statistical analysis confused you? What connections between the results and the argument were unclear? What part of the news article write-up of the report was confusing? Write around 5 additional questions you still have after doing a careful analysis of the news article and the academic study.