SNA4DS Project Template

Group Number Goes Here

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2025-09-01

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> **Citations in Quarto**
>
> Add the bibtex entry in the .bib file. You can find the entries in Google scholar, but double check since it is not always correct.
> Call the citations in the text: - Citation within parentheses (Aust & Barth, 2020) - Multiple citations (Aust & Barth, 2020; R Core Team, 2021) - In-text citations Aust & Barth (2020) - Year only (2021)
> Only if your citation appears in the text it will also show up in the Reference list. Don't manually modify the Reference list.

Abstract (200 words) – 0.3 POINTS

Summarize the report. Write this as the very last thing.

- What is the main topic you are addressing?
- What are your research questions and hypotheses?
- What are your results and the main conclusion?

1 Introduction (1000 words) – 0.5 POINTS

- What is the main topic that is going to be studied in this paper?
- Why is it important?
- What are the existing studies that address it already?
- What are your research questions and hypotheses?
  - minimum 1 hypothesis for RQ1,
  - minimum 2 exogeneous and 2 endogeneous hypotheses for RQ2,
  - each hypotheses has to be supported by a citation.
- Why are they important? How are they connected to previous work or to a problem you raised?
- Which methods are you using? Why?
- How is your work going to contribute to the field/or to whom (e.g., industry)?
- What does the rest of the report look like? In one short paragraph, list the topics of the following sections.

For RQ2, provide your hypothesis in the following table format too, for a clear overview:

Hypothesis	ERGM Term	Motivation
H1: Students who I consider friends also consider me their friend	`mutual`	The `mutual` term captures the tendency for outgoing ties to co-occur with incoming ties between actors, capturing the dynamic of reciprocation.

2 Methodology

2.1 Dataset

(about 500 words) 1 POINT (+ BONUS)

- Which data set are you going to use? Three options:
  - Use readily/easily available data (0 bonus points)
  - Combine two or more existing datasets (max 0.5 bonus points)
  - Scrape or collect your own data (max. 1 bonus point)
- Clearly explain where the data is coming from:
  - Who collected the data?
  - What is the source?
  - When was the data produced?
  - How was the data collected?
- Provide descriptive measures of your data (tables, plots, etc.)
- Why is this data useful to study your topic and answer your research questions?
- What is the potential bias in the data? How does this affect your results?

2.2 Data analysis (Research Rationale)

(about 500 words) – 1 POINTS

- Why are these two methods suitable for your data?
- Why are these two methods suitable for your research questions?
- Are there other methods to address these questions? If yes, why are the methods you chose better for this case?

3 Results

(about 2000 words)

3.1 Model 1

(about 1000 words) – 2.5 POINTS

- Present your results appropriately (plots, tables…) and discuss your findings in plain English
- Discuss the meaning of your findings in relation to your hypothesis. (half of the points evaluated in this other part)

Table 2: Example dataframe printed

V1	V2	V3
age	gender	eyes_col
7	M	BLUE
8	F	BROWN
8	M	GREEN

Table 3: Comparison of Model 1 and Model 2

	Model 1	Model 2
(Intercept)	5.03***	
	(0.22)	
groupTrt	−0.37	4.66***
	(0.31)	(0.22)
groupCtl		5.03***
		(0.22)
R^2	0.07	0.98
Adj. R^2	0.02	0.98
Num. obs.	20	20

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$

Table 2: Example dataframe printed

V1	V2	V3
7	F	PINK

3.2 ERGM

(about 1000) – 2.5 POINTS

- Present your results appropriately (plots, tables…) and discuss your findings in plain English
- Discuss the meaning of your findings in relation to your hypothesis. (half of the points evaluated in this other part)

`Models: bars denote standard errors (95%).`

4 Conclusion

(about 350 words) – 0.7 POINTS

What were your topic and research questions again? (1 sentence)

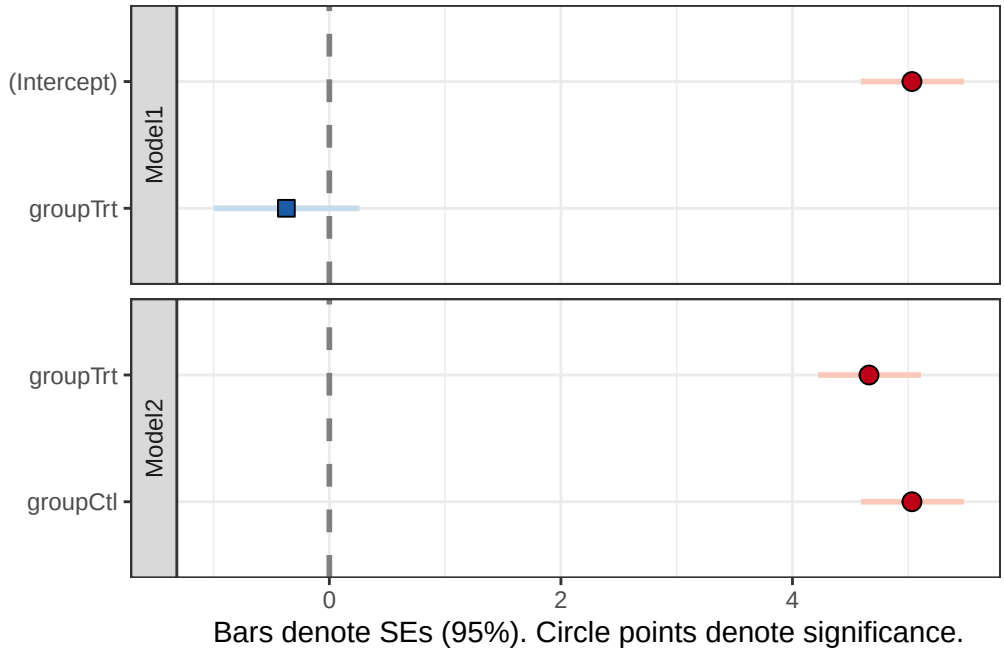
What did you learn from the two analysis you run? *** most important point to address 0.5 POINTS here

Who benefits from your findings?

What does remain an open problem?

Can you give suggestions for future work in this area?

Figure 1: Visual Comparison of Model 1 and Model 2



References

Aust, F., & Barth, M. (2020). *papaja: Create APA manuscripts with R Markdown*. Retrieved from https://github.com/crsh/papaja

R Core Team. (2021). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from https://www.R-project.org/

5 Technology statement student(s)

For the assignment, you must add the technology statement, using the text below. Replace the text in capital letters with the requested information.

> During the preparation of this work, I/We used [**NAME TOOL / SERVICE / VERSION OF AI TOOL**] in order to [**REASON**]. The following parts of the assignment were affected/generated by AI tool usage: [**INTRODUCTION / METHODS / xxx, DISCUSSION**]. After using this tool/service, [**NAME STUDENT(S)**] evaluated the validity of the tool's outputs, including the sources that generative AI tools have used, and edited the content as needed. As a consequence, [**NAME STUDENT(S)**] take(s) full responsibility for the content of their work.