When Students Miss Class Due to a Medical Condition, Are they Engaging More with Science?

Porter Bischoff, Kody Garrett, Clayton Rawson, Dr. Josh Premo*, Dr. Britt Wyatt*
Biology Department, Utah Valley University
* = Principal Investigator

Background

- Experiences in classrooms can lead to an increase of STEM motivation[1,3]
- Personal experiences can have a large influence on one's STEM motivation[2]
- Personal experiences with medicine can influence career choice[4]
- Chronic illnesses and medical experiences can potentially lead to more interruptions[5,6,7]

Methods

- Pre-post surveys given in 14 different biology courses (major and non-major) at an open enrollment institution.
- 388 responses
- Terminology on data analysis used

Medical Interruptions[8]

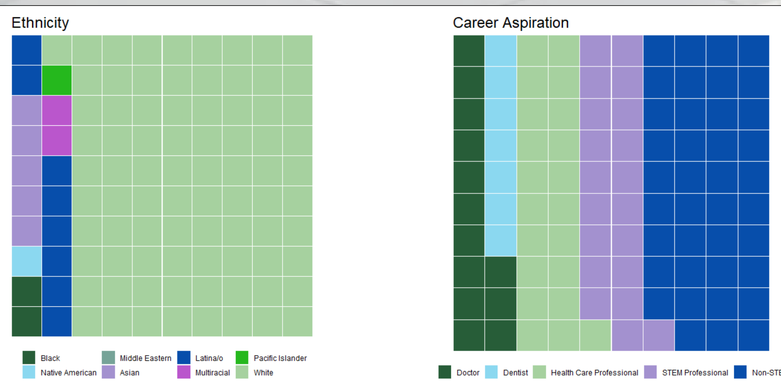

Figure ###: 3 charts showing demographic percentages, where each "box" represents 1% of the data.

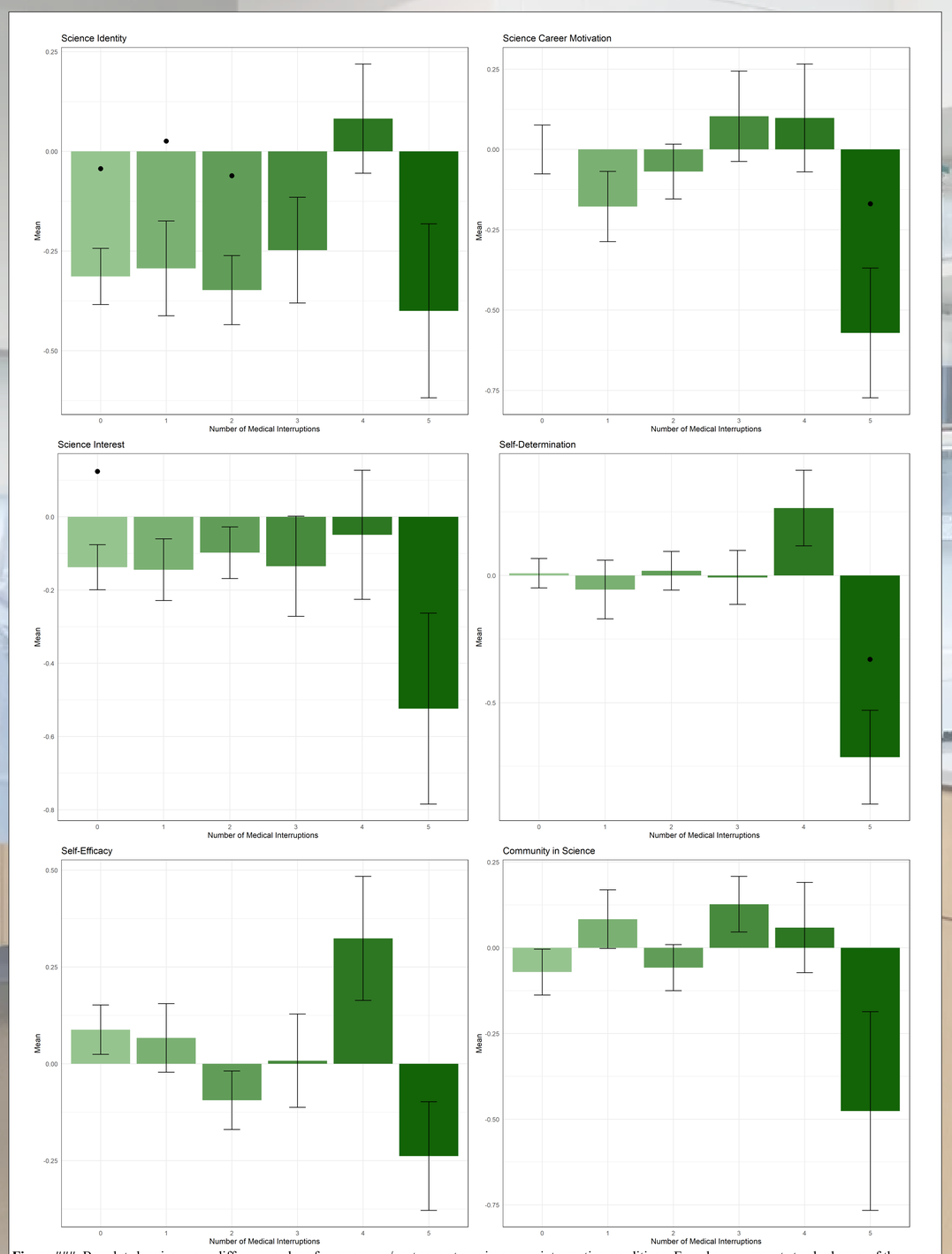

Figure ###: Bar plot showing mean difference values for across pre/post semester pairs across interruption conditions. Error bars represent standard error of the mean. Significant differences ($p \leq 0.05$) are indicated by black data points above the bars. "Mean" shows difference in Likert Scale between pre and post semester data. Number of medical interruptions represents a Likert Scale of medical interruptions.

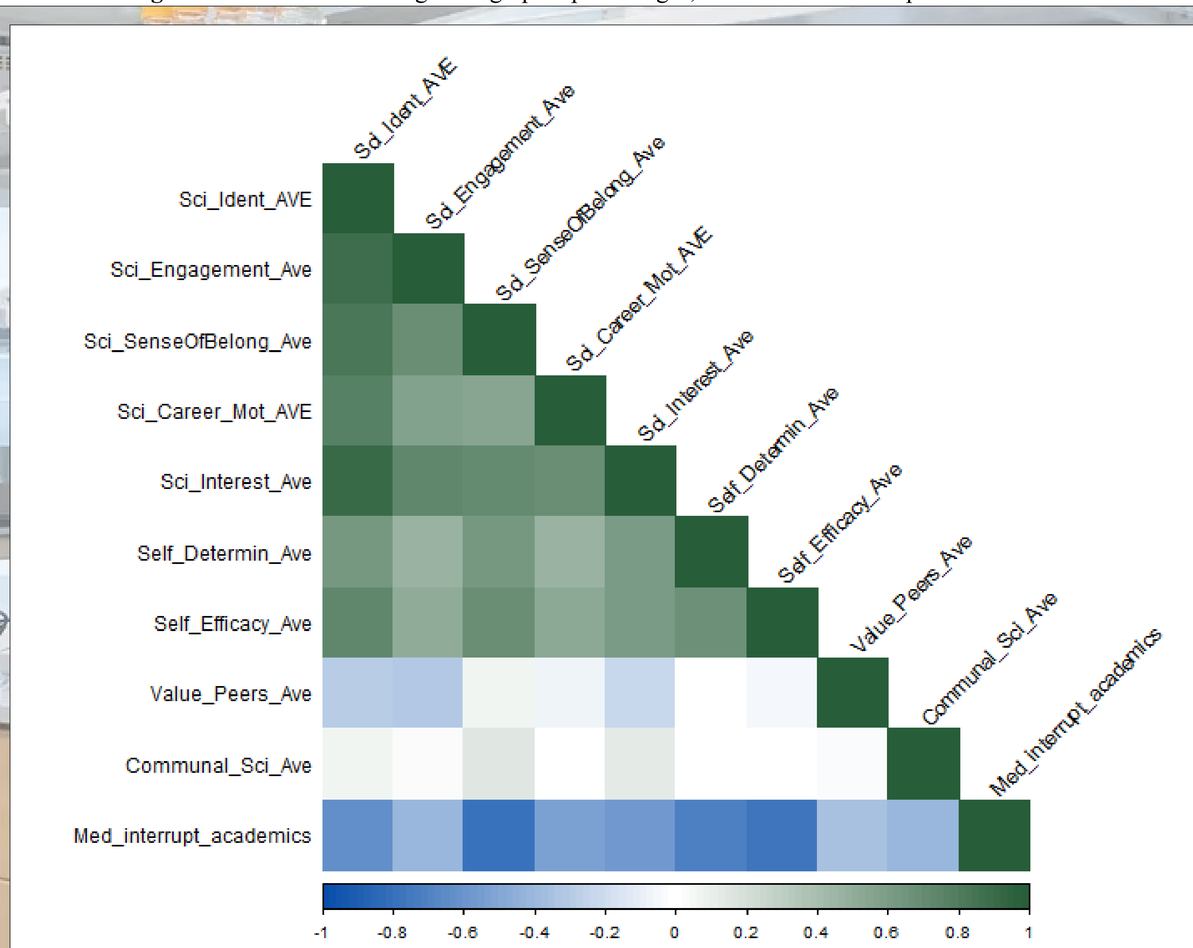

Figure ###: A correlation matrix heatmap depicting the relationship between variables. The color gradient represents the strength of the correlation, ranging from dark blue (negative) to dark green (positive). Higher intensity indicates stronger correlations. The diagonal elements represent the correlation of each variable with itself. The labels on the axes indicate the corresponding variables.

Survey Questions

Website

References

NSF
UTAH VALLEY UNIVERSITY UVU
iSPIRE
Inclusive Science Pedagogy & Identity in Research Experiences