Introduction

- Numerous studies have shown academic stress can negatively impact academic performance and health.

- We are comparing the performance on the digits-backwards and Stroop tasks—cognitive tasks designed to assess working memory—on a day students have their hardest exams and on week they do not.

- If stress were to negatively affect cognition, we anticipate students would perform worse on tasks on the exam day.

Methods

- Stroop Task: participants read columns of (1) words, (2) colored Xs, and (3) colored words (Figure 2) aloud as fast and accurately as possible, for a maximum of 100 correct words or colors from each of the 3 lists.

- Digits Backwards Task: participants must recite successively longer lists of numbers backwards, for a maximum of 14 correct lists (Figure 1).

- Statistical Analysis: t-test between performance on baseline (no exam) and stress (exam day) conditions for all of the tasks.

Discussion

- Preliminary analysis suggests that exam stress does not alter working memory.

- Found no significant difference between the baseline and stress conditions for either of the tasks.

- This is an ongoing study—null findings could be due to a small sample size (n=14).

- We anticipate that a greater sample size will potentiate the relationship between working memory and academic stress.

- At the conclusion of the study, we expect to find on the day of a stressful exam students will perform worse on the tasks.

Limitations

- Primarily the small sample size (n=14).

- Other limitations:
  - Order effects; was the baseline exposure to cognitive tasks the first or second exposure (i.e. does everyone improve their second time).
  - Confounding variables; did other stressors (academic, life) interfere with baseline measures, etc.
  - Human error; differences in time allocated and/or manner presented to participants for tasks.

References
