



The Impact of Self-Care on Negative Stress

Aaisha Dass, Carolina Flolo, Diana Gamboa, Emma Greenberg, Manh Le, Arrianna Lewis, Luciana Pena, Gabriel Sanchez, Sophia Schultz, Angelina Slivinsky



Background

Negative stress is a pervasive issue among college students, significantly impacting their academic performance.

- Research highlights the importance of self-care as a practical intervention to mitigate stress and enhance well-being.
- A study conducted by Zhong and Xie explores how brief, in-class self-care practices can reduce distress and improve learning outcomes in a college environment (Zhong & Xie, 2023).
- Studies indicate that mindfulness practices, such as meditation and journaling, reduce anxiety and promote emotional regulation, improving students' ability to manage academic pressures (McKenzie, 2022).
- Holistic therapies like guided imagery and audio-visual entertainment have effectively enhanced cognitive function and reduced perceived stress among students (Slota et al., 2024).

These findings emphasize the potential of integrating structured self-care activities within academic settings to support student mental health and academic success.

Methods

This experiment was conducted on students enrolled in a PAL course for CHEM 1B (General Chemistry II), CHEM 124 (Organic Chemistry II), and BIO 25 and 26 (Human Anatomy and Physiology I and II). A short survey was administered before students completed each self-care activity to gauge their existing self-care habits and levels of negative stress.

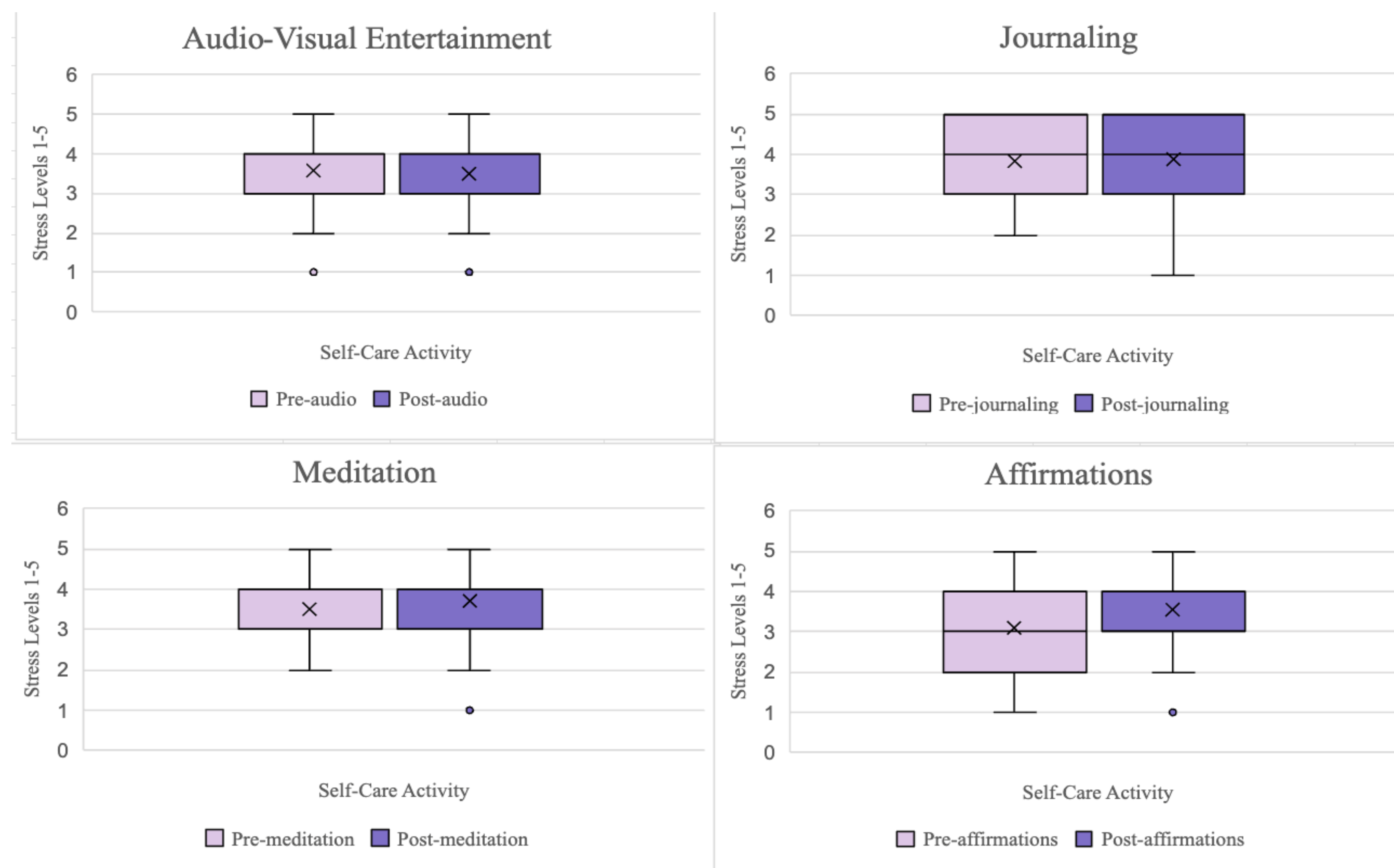
Facilitators identified four activities designed to practice self-care. These interventions were implemented throughout the semester during the first five minutes of PAL class sessions and alternated every two weeks.

The activities included:

- Audio-visual entertainment during weeks 5 and 6
- Meditation during weeks 7 and 8
- Journaling during weeks 9 and 10
- Positive affirmations during weeks 11 and 12

After each activity, a post-survey with similar questions to the pre-survey was administered. Free-response questions were incorporated into both surveys, enabling students to share their personal experiences. Researchers quantitatively compared the pre- and post-questionnaires, as well as searched for recurring themes in the free-response answers. **The study aimed to decrease students' negative stress levels through the integration of self-care activities into weekly PAL class sessions.**

Data & Results



Results: T-tests were used to evaluate changes in stress levels before and after each two-week activity. The sample size (n) for each activity was based on the number of matched pre- and post-survey responses, using the smaller post-survey count. To match the post count, excess pre-survey responses were randomly removed. P-values were calculated to determine statistical significance.

Activity	Stress Before 1=low 5=high	Stress After 1=low 5=high	n value	p value
Audio Visual	3.59	3.50	78	0.284
Meditation	3.53	3.70	70	0.153
Journaling	3.80	3.86	44	0.390
Affirmations	3.08	3.55	51	0.0269

Discussion

The majority of the self-care activities showed no significant change in student stress levels. The activity involving positive affirmations had a p-value of 0.0269, indicating that the data is statistically significant. However, stress increased, contrary to expectations.

Why did stress increase during the activity involving positive affirmations?

- The pre-survey was given immediately after spring break, a time when students often feel relaxed and less stressed. This is likely because they had more time to rest and practice self-care during spring break.
- In comparison to the pre-survey, the post-survey responses indicated higher levels of negative stress, and less time spent practicing self-care. This was likely caused by an increase in academic demands, as well as a decrease in time for self-care practices.

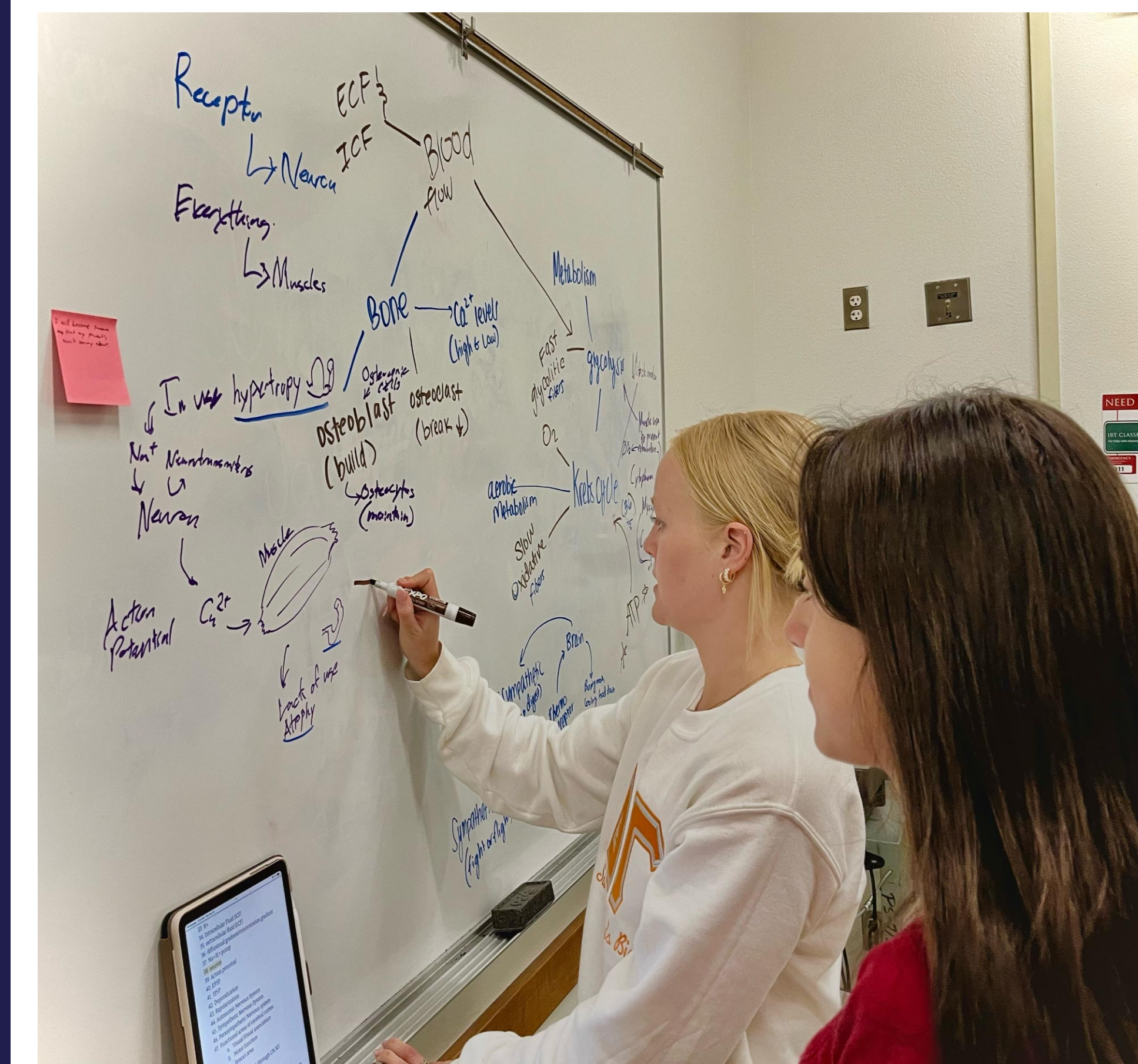
Interpretation

- These results suggest that while self-care is often associated with lower stress, the specific activities and timeframes used in this study were not effective in reducing negative stress.
- The five-minute activities may not have been conducted for long enough periods to significantly impact students' stress. In addition, uncontrollable factors, such as personal challenges, may have affected students' ability to engage meaningfully with the interventions.

Future Work

- In the future, we plan to conduct activities that can be run for the entire class period, 50 minutes. The administration of pre-surveys at the beginning of class and post-surveys immediately after class will also allow us to evaluate short-term stress relief.

Affirmation Activity Photo



Quotes

"Self-care activities alleviated my negative stress by helping me feel grounded."

"[The] positive affirmations and relaxing music [activities were the most helpful for me]."

References

McKenzie, S. (2022, May 30). *Mindfulness Meditation for Student Success: The Impact of a Virtual Meditation Group on Community College Student Stress Coping, Resilience, and Persistence*. ERIC. <https://eric.ed.gov/?id=ED619050>

Slota, M., Crowell, N., Fay, L., Brasher, P., Hagen, B., & Healy, H. (2024, June 7). *Impact of a Mindfulness and Self-care Intervention on Stress, Self-compassion, and Attention in University Healthcare Students and Faculty*. *Journal of American College Health: J of ACH*. <https://pubmed.ncbi.nlm.nih.gov/38848318/>

Zhong, B., & Xie, L. (2023, February 21). *Making "Joy Pie" to Stay Joyful: Self-care Interventions Alleviate College Students' Mental Health Challenges*. *International Journal of Environmental Research and Public Health*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10001250/>

Acknowledgements

We extend our sincere gratitude to the **PAL Faculty**, our advisor **Dr. Shambrom**, and **Dr. Wright** for his support with *statistical analysis*. We also thank the **STEM4Equity** program for providing *funding* for this research. Lastly, we are especially grateful to the **students** who *participated in this study*.