

Mindfulness-Based Stress Reduction for Pre-Clinical Medical Students: Exploring Efficacy and Benefit

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Introduction

Studies have shown that rates of stress and burnout in the field of healthcare are significantly higher than the general population. This observation holds true for medical students given the demanding rigor of their coursework.

Mindfulness Based Stress Reduction (MBSR) is a standardized program through which participants learn to cultivate mindfulness in their everyday lives. This program has become a commonly employed technique to teach mindfulness to healthcare practitioners in order to help alleviate these forms of psychological distress.

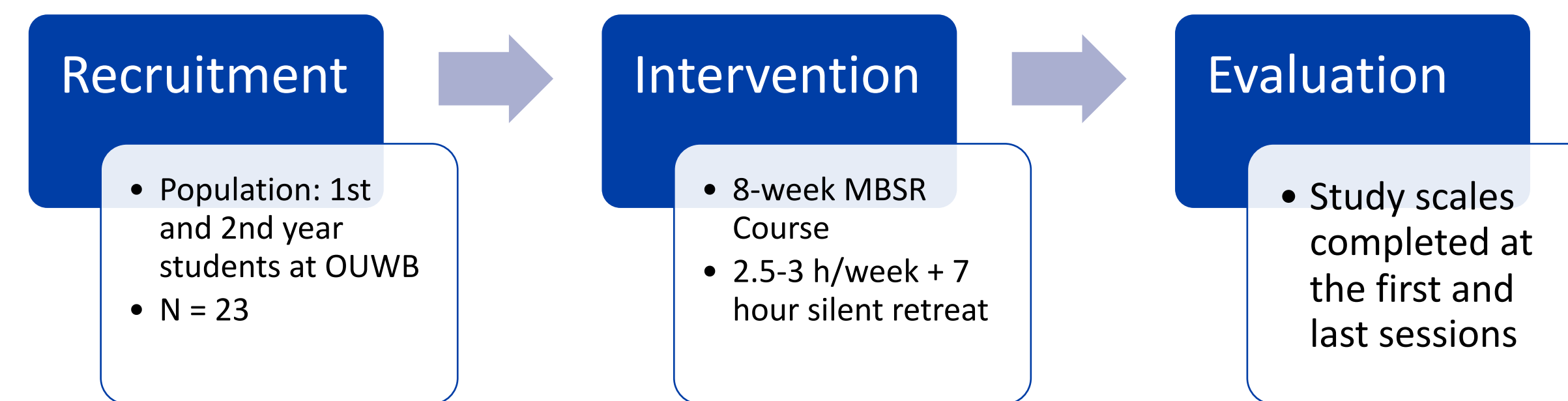
This study was intended to lay the groundwork of a mindfulness program for medical students in their pre-clinical years. We hoped to better understand the feasibility and efficacy of an 8-week MBSR course to impact measures of psychological well-being in this population.

Aims and Objectives

The goals of this pilot study were as follows:

1. To assess the feasibility of an 8-week, 30 contact hour Mindfulness Based Stress Reduction Course for first and second year medical students through data on enrollment, retention, and attendance.
2. To measure the impact of this mindfulness intervention on measures of student's perceived levels of stress, burnout, fear of compassion, and mindfulness. These variables were measured using peer-reviewed quantitative surveys administered at the first and last course, and as a follow-up assessment into students third and fourth years.
3. Explore how this course can serve as a framework for future initiatives aimed at improving the mental health and overall wellness of pre-clinical medical students.

Methods



23 first and second year OUWB medical students volunteered to enroll in this MBSR course. Participation was free to students. The course was taught by a certified physician instructor. The standardized 2019 Brown University curriculum was used.

Each weekly session included learning and practicing different formal mindfulness practices including yoga, sitting and walking meditation, and the body-scan. Mindful eating, listening, speaking and mindfulness of daily activities were also taught and labelled informal practices.

Scales included in this project included the Perceived Stress Scale (PSS), the Maslach Burnout Inventory (MBI), the Gilbert Fear of Compassion Scale (FCS), and the Mindful Awareness Attention Scale (MAAS).

Results

18 of the 23 enrollees (79%) attended four or more of the ten sessions (the all-day class counted as two sessions). Average class attendance of these 18 students was eight of ten sessions. 5 of these 18 students did not submit both the Post-Course and 12-Month Follow-Up assessments. Data from the remaining 13 participants was analyzed.

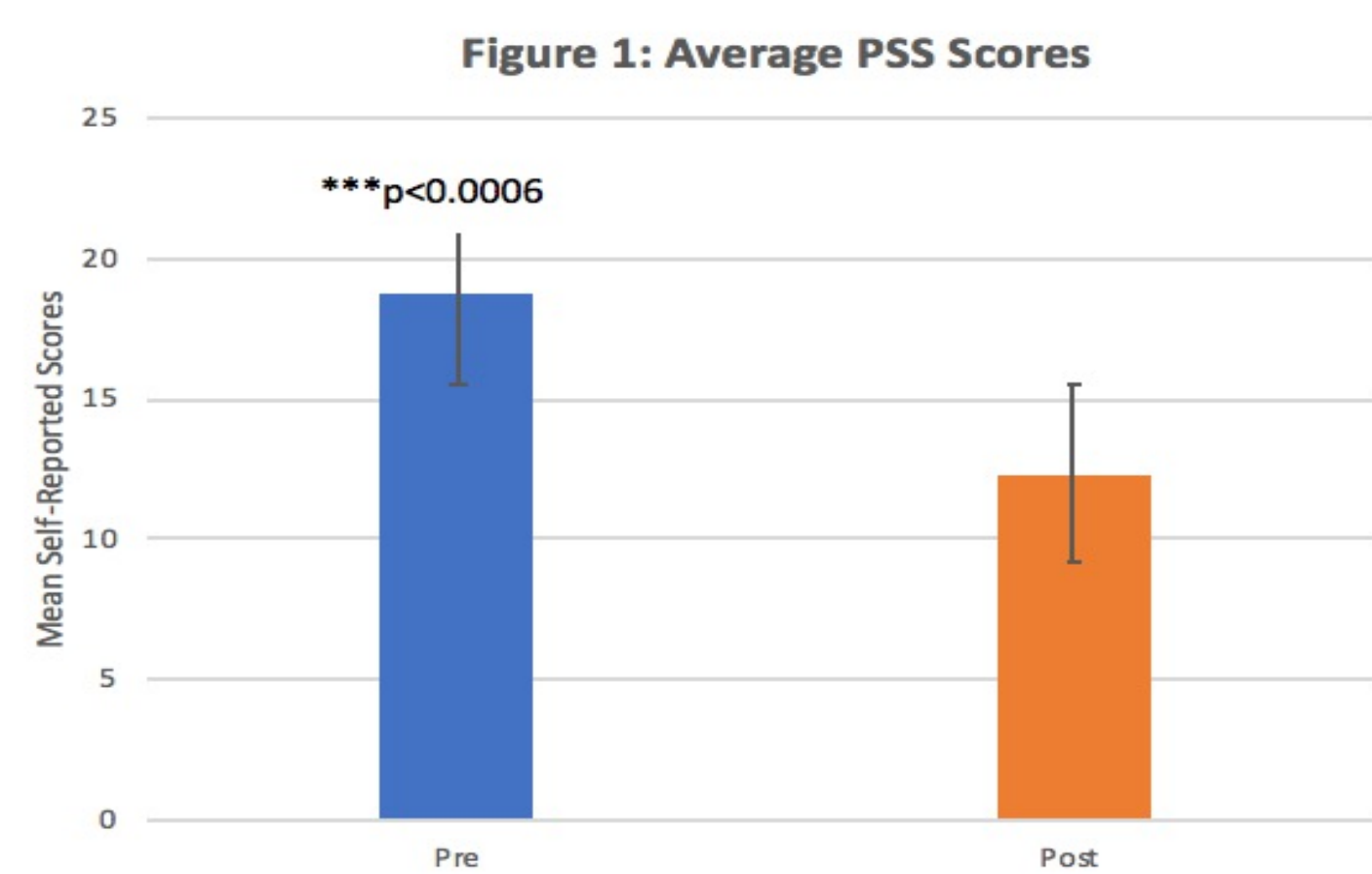


Fig 1: Average PSS scores were significantly lower at the post-course measurement

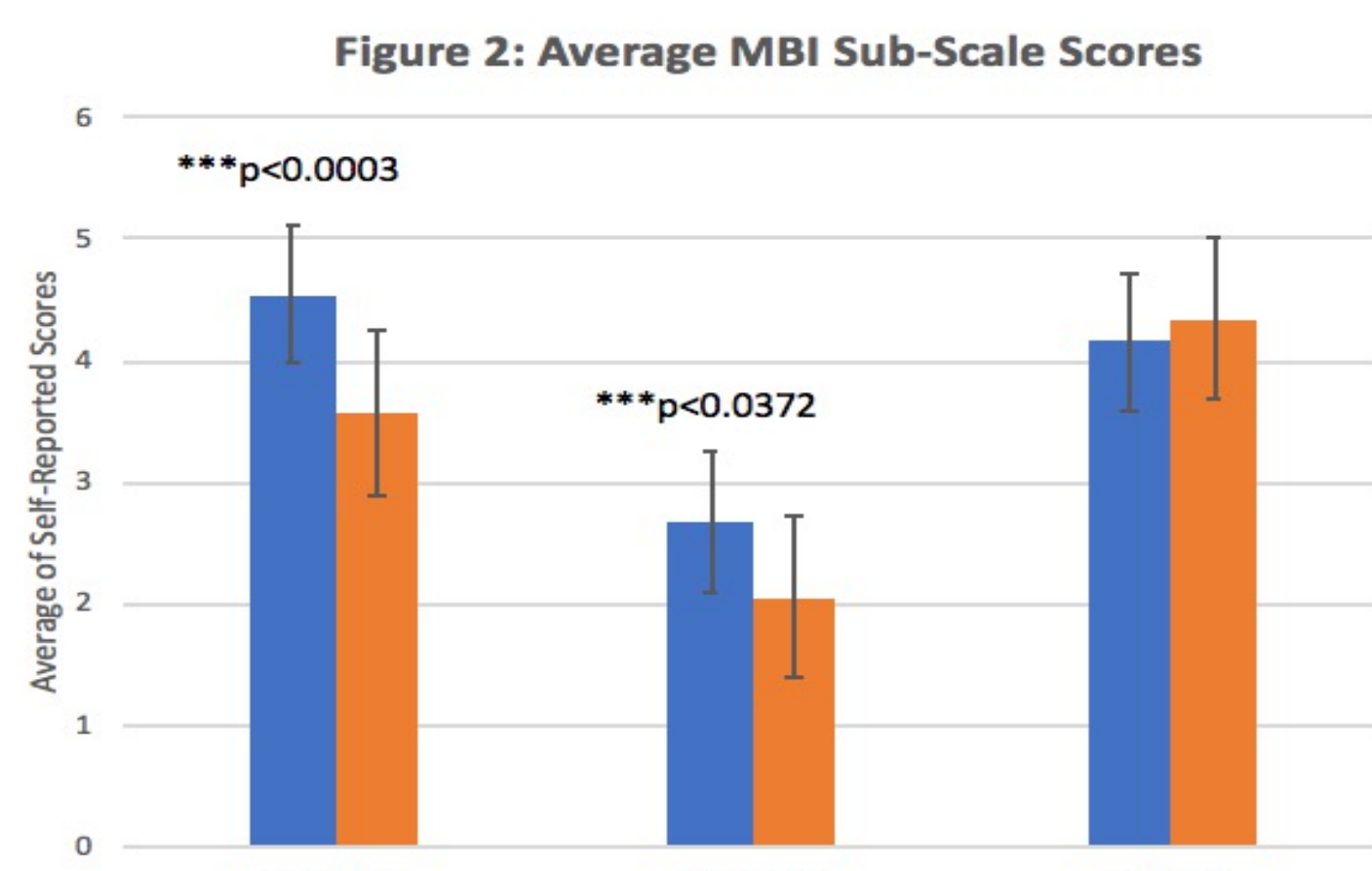


Fig 2: MBI exhaustion and cynicism subscales were significantly reduced from pre to post course evaluation. Increased personal efficacy did not reach significance.

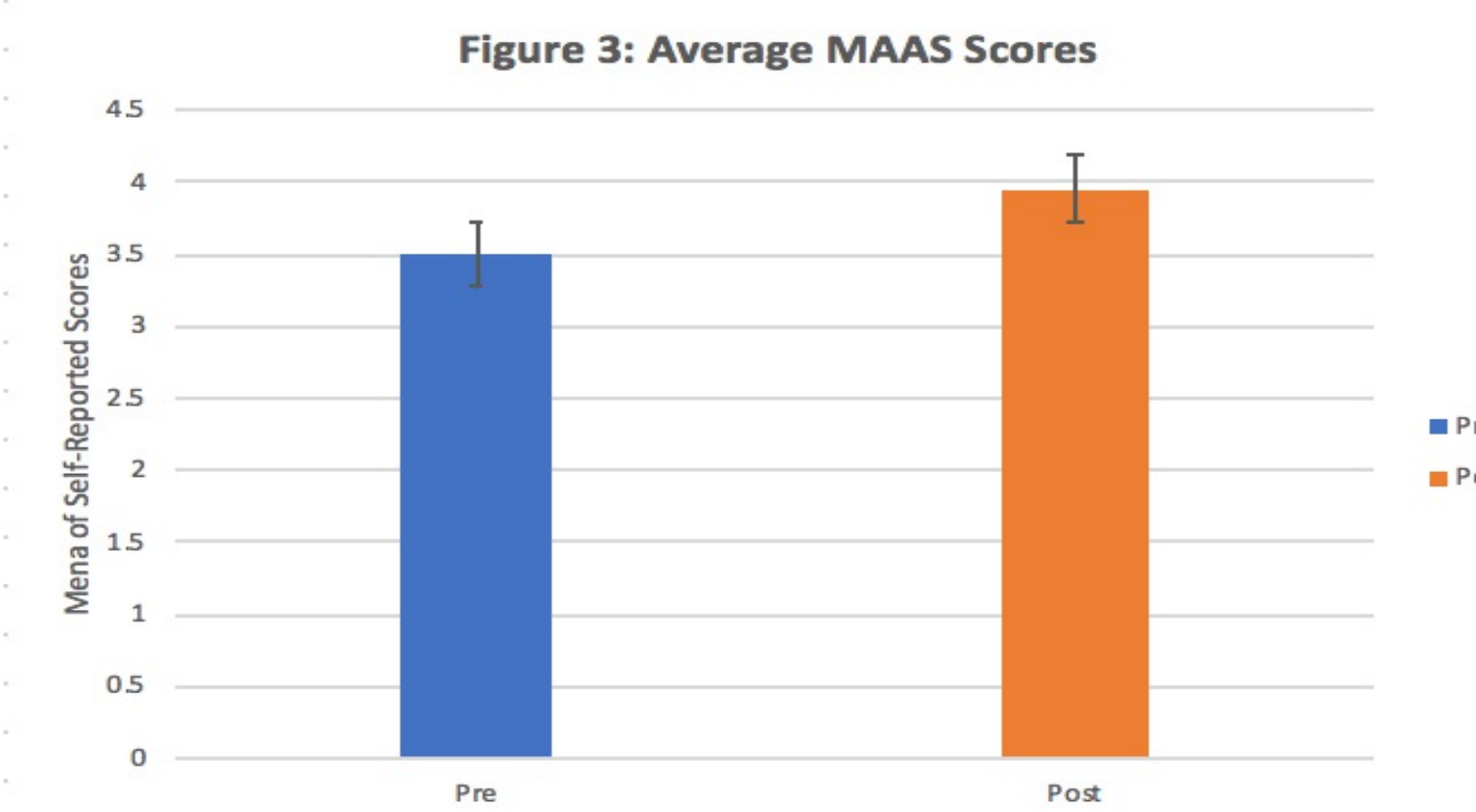


Fig 3: Average MAAS scores were increased from pre to post course evaluation but did not reach significance (p=0.0521)

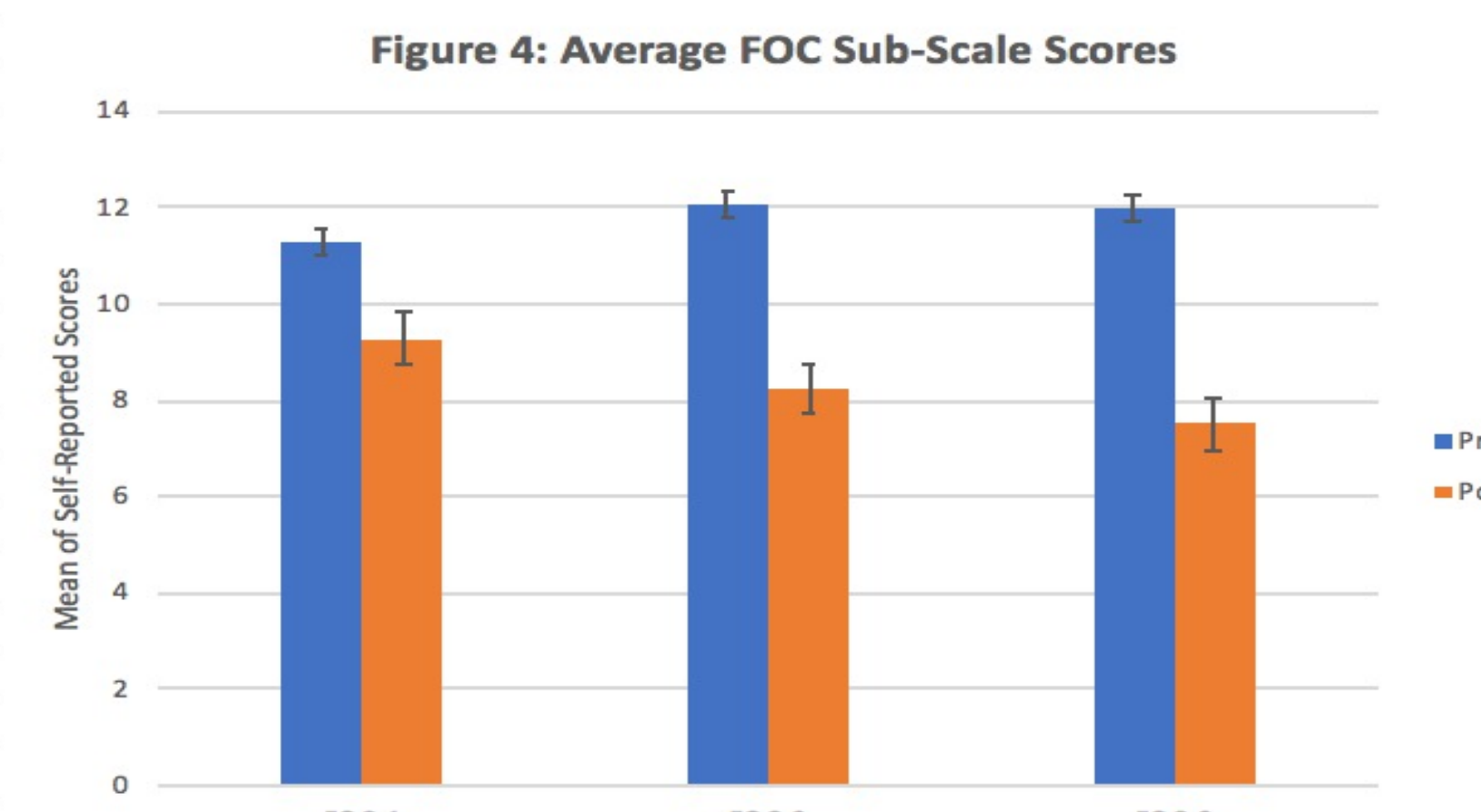


Fig 4: Average FOC subscale scores were reduced from pre to post course evaluation but did not reach levels of significance. (p=0.373, p=0.174, p=0.248 respectively)

Conclusions

Feasibility:

- The retention rate for our study was 79%. Previous studies such as on by Van Dijk et al demonstrated a retention rate of 96%. While unfavorable on the surface, our study was 28h of extracurricular time vs 16h of duty hour time in their study
- Additional work with this project will include qualitative analysis to better understand participant experiences.

Efficacy:

- Clear benefits are demonstrated in the categories of perceived stress as well as emotional exhaustion and cynicism.
- While scores from the MAAS and FOC sub-scales did not achieve significance, they did trend in positive directions.
- The missing post-course follow-up data is a limitation to the study, as it hinders our ability to understand the lasting impact of this course.

Future Direction:

- The authors will seek to incorporate and study a standard, or perhaps modified, MBSR course as a voluntary, for-credit option within the OUWB humanities curriculum. We believe that our data support the objective benefit that this course provides students. Embedding this time within the school's curriculum could greatly improve retention rates.

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Acknowledgements

For their help in making this study a possibility, I would like to express my gratitude to Dr. Ruth Lerman for her mentorship as my PI as well as for instructing our MBSR course; to Patrick Karabon for his expertise and statistical consultation; the Beaumont Center for Mindfulness for organizing logistics of this course; and the OUWB Embark Program for their generous grant which made the course accessible for all who wished to participate.