The Implementation of a Mindfulness-Based Stress Reduction (MBSR) Program for the Reduction of Stress and Burnout in Students of a Doctoral Nurse Anesthesiology Program

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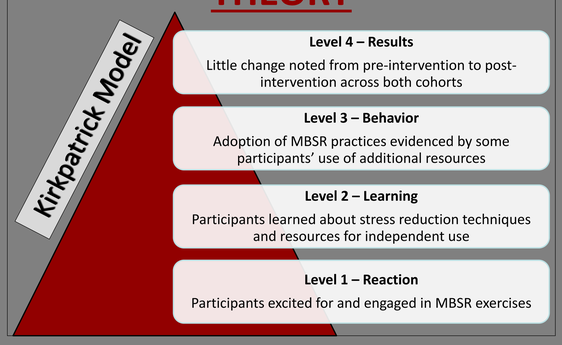
BACKGROUND

- High levels of stress and burnout are often reported by students of Certified Registered Nurse Anesthesiology (CRNA) programs
- Stress is defined as the body's physical, mental, or emotional response to external or internal demands or challenges
- Burnout is defined as a state of physical, emotional, and mental exhaustion caused by prolonged and excessive stress
- Mindfulness meditation is a principal component of MBSR and is a method for reducing personal suffering and developing insights, compassion, and wisdom
- The MBSR intervention has been proven to reduce stress and improve the quality of life in healthcare professionals. Studies have also shown that mindfulness has a positive effect on brain areas associated with attention, regulation, and emotional adaptation
- Currently, there are no studies available that assess the effect of MBSR on nurse anesthesiology students

THEORY



MBSR CURRICULUM

MindShift® CBT smartphone app

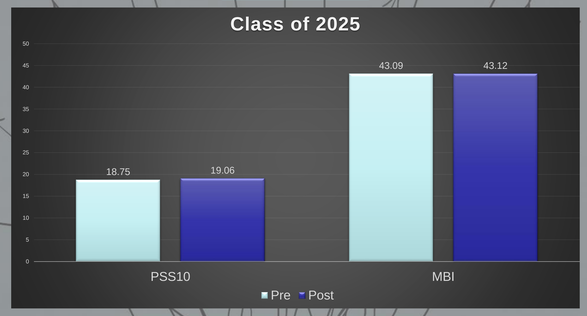
(iOS & Android)

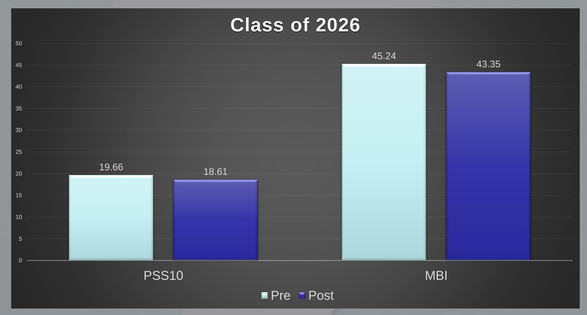
In-Person MBSR Exercises:

- Session 1 -Test Anxiety
- Session 2 - Body Scan
- Session 3 - Tense and Release
- Session 4 - Mental Vacation
- Session 5 - Social Anxiety

And Three *Optional* Independent Sessions

RESULTS





STATISTICAL ANALYSIS AND DATA COLLECTION

- Class of 2025: PSS 10 Pre intervention mean 18.75, post 19.0. (P = 0.84). MBI pre-43.09, Post 43.12 (P = 0.67).
- Class of 2026: PSS-10 Pre intervention mean 19.66, post 18.61 (P= 0.60). MBI pre-45.24, post 43.35 (P = 0.77)
- MBSR intervention did not prove to significantly improve PSS or MBI scores
- Of the 36 students who returned post intervention surveys:
  - 78% reported MBSR to have been beneficial
  - 39% used additional sessions
  - 78% would recommend future classes using MBSR techniques to help reduce stress and burnout.

PURPOSE

The purpose of this study is to evaluate the effectiveness of MBSR in reducing stress and burnout among nurse anesthesia students

METHODS

- This is a quasi-experimental, pre-test/post-test study design
- There are 71 participants from the three cohorts in the AMC CRNA program
- Inclusion criteria: consenting, actively enrolled student of the AMC CNA
- Exclusion criteria: consent for participation in the MBSR study not given
- Each subject will be exposed to five in-person MSRB sessions and three independent study sessions
- The pre-test/post-test evaluation included the Perceived Stress Scale and Maslach Burnout Inventory
- Qualtrics will be utilized for participant's anonymity; pre-surveys and post-surveys will be anonymized, and responses will be divided by graduating class

REFERENCES

DISCUSSION

- One limitation of our study is the small sample size. Due to time constraints during MBSR implementation, we were unable to include SRNAs from the Class of 2027. Moreover, the original plan of eight in-person MBSR sessions was modified to five in-person sessions, with three additional sessions to be completed independently by participants. As a result, not all participants may have completed the full eight-session protocol. Finally, response bias may be present in the post-survey, as the participants and the researchers are involved in the same program.
- The MBSR program was implemented well after the start of each cohort's respective educational programs. It is possible that earlier implementation may have offered greater stress and burnout management benefits to the students. Further consideration to the timing of MBSR exercises may be warranted. Additionally, the intervention period of 5 weeks for in-person sessions may be inadequate in length to offer sufficient benefit. Future research may consider adjusting the intervention period to meet the stress and burnout management needs of the students.
- In future studies, the long-term effects of MBSR on stress and burnout reduction among SRNAs could be further explored, not only within our program but also by expanding to include participants from various CRNA programs, thereby increasing the sample size. We also hope the Center for Nurse Anesthesiology and Albany Medical College can incorporate MBSR into their curriculum for future cohorts to start healthy and safe ways to reduce stress and burnout.