Implementing Mandatory Mindfulness and Stress Reduction Training for Surgical Students at PCOM Medical School

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This proposal advocates for implementing mandatory mindfulness and stress reduction training sessions for surgical students at Philadelphia College of Osteopathic Medicine (PCOM). It is known that medical students, particularly those in surgical disciplines, experience high levels of stress, which can negatively impact their mental health, academic performance and overall well-being. Mindfulness-based interventions have shown promise in reducing stress and enhancing resilience among medical students. By integrating this training into the surgical curriculum, PCOM aims to equip students with coping skills to effectively manage stress, therefor promoting their overall success. Below is an overview of the importance of such training, supported by recent empirical evidence. This type of training is crucial for addressing the significant stressors and mental health challenges faced by surgical students. By introducing mindfulness techniques early in their training, students can develop cruical skills to navigate the demanding environment of the medical field, ultimately promoting their well-being and resilience as future surgeons.

Keywords: Medical students, Stress-reduction, Mindfulness

INTRODUCTION

Surgical training is renowned for its rigorous demands and high-stress environment, which can adversely impact students' mental health and well-being. The "prevalence of burnout, anxiety, and depression among surgical trainees" is well-documented (Shanafelt et al., 2019). Because of this, there is more recognition of the need to implement interventions that promote resilience and mitigate stressors within surgical education.

Mindfulness-based interventions have become more prevalent in various healthcare settings for their effectiveness in reducing stress and enhancing psychological well-being (Regehr et al., 2013). According to Rosenzweig et al., (2013), introducing curriculum on self-advocacy and removing the stigma of self-care has shown "the positive effects of mindfulness training on medical students, including decreased levels of stress, anxiety, and burnout." However, the integration of self-awareness programs specifically tailored to surgical students remains limited.

SIGNIFIGANCE

(CG Forensic Mental Health, 2024)

Incorporating this curriculum at PCOM, and all medical schools would prove signifcant. By equipping students with mindfulness skills early in their training, PCOM can proactively address the psychological challenges inherent in surgical education (Neufeld & Malin, 2021). Moreover, "fostering resilience and well-being among surgical students not only enhances their personal health but also contributes to improved patient care and professional longevity" (Shanafelt et al., 2017).

CONCEPTUAL VALIDITY

The proposed curriculum aligns with theoretical frameworks emphasizing the role of mindfulness in stress reduction and resilience-building. "Grounded in principles of cognitive-behavioral therapy and mindfulness-based stress reduction" (Windsor University School of Medicine, 2021). the program aims to enhance students' self-awareness, emotional regulation, and adaptive coping strategies.

Methodology

RESEARCHER & PARTICIPANTS

As the researcher, my role entails designing and implementing the mindfulness training program, collecting data on participants' stress levels and well-being, and analyzing the outcomes. Participants will consist of surgical students enrolled in the PCOM medical school, who will engage in the training sessions and provide feedback through surveys and focus group discussions.

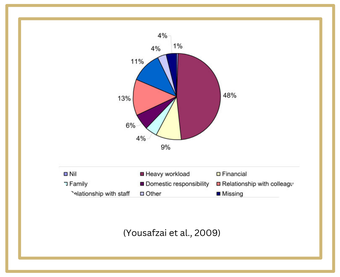
UNBIASED RESEARCH

To minimize bias and error, the study will "employ randomized controlled trial designs where feasible, utilize validated measures to assess outcomes, and implement rigorous data collection and analysis procedures" (Acharya & Sahani, 2022). Additionally, efforts will be made to mitigate potential surprise variables through proper sample selection and statistical control.

ETHICAL ONSIDERATIONS

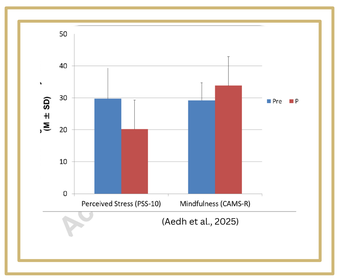
Ethical considerations include obtaining informed consent from participants, ensuring confidentiality of data, and addressing any potential risks associated with participation in the training program. Institutional review board (IRB) approval will be sought prior to starting of the study to ensure compliance with ethical guidelines (Philadelphia College of Osteopathic Medicine, 2024).

RESULTS



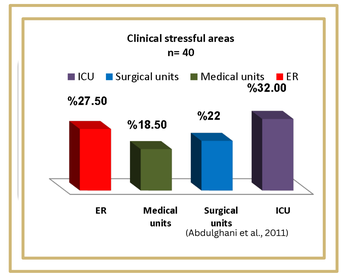
(Yousafzai et al., 2009)

Research by Rosenzweig et al. (2013) demonstrated that mindfulness-based interventions can lead to significant reductions in stress and anxiety levels among medical students. Similarly, a study by Greeson et al. (2015) found that participation in a four-week mind-body skills group resulted in decreased stress and increased mindfulness among medical students.



(Aedh et al., 2025)

Shanafelt et al. (2017) conducted a longitudinal study examining the impact of mindfulness training on physician burnout and well-being. They found that participants who underwent mindfulness training showed improvements in resilience and were better able to cope with stressors in their professional lives.



(Abdulghani et al., 2011)

A study by Polle and Gair (2021) reviewed the literature on mindfulness-based stress reduction for medical students. They found evidence suggesting that mindfulness training can improve concentration, decision-making, and overall professional performance.

HOW DO WE GET THE CURRICULUM IMPLEMENTED?

Develop a Course

- Develop a structured curriculum
- Collaborate with faculty, mental health professionals and mindfulness experts
- Facilitate sessions using guided meditation, experiential exercises, and interactive discussions
- Administer & then analyze pre- and post-training assessments to evaluate participants' stress levels, anxiety levels and burnout scores
- Meet with curriculum coordinators and board members to discuss course as graduation requirement
- Conduct statistical tests to determine the significance of observed differences

Transactional Model of Stress and Coping

"Evaluates how major life events and daily hassles impact on emotions with the emphasis on cognitive appraisal and coping with stress" (Obbarius et al., 2021)

Primary Appraisal: Stress from perceived threats or challenges; evaluate stressors to determine significance and relevance.
Secondary Appraisal: Assess ability to cope with perceived stressors; may experience stress if lack of control or inadequate resources are perceived.
Coping Mechanisms: this model emphasizes coping strategies like mindfulness-based interventions which promote self-awareness, emotional regulation and coping strategies.
Feedback Loop: acknowledges dynamic nature of stress and coping; mindfulness training can enhance coping skills and self-efficacy, leading to positive changes in stress responses (Obbarius et al., 2021)
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HOW DOES THE IMPLEMENTATION OF MANDATORY MINDFULNESS AND STRESS REDUCTION TRAINING IMPACT SURGICAL STUDENTS' PERCEIVED STRESS LEVELS AND PSYCHOLOGICAL WELL-BEING?

WHAT ARE THE LONG-TERM EFFECTS OF MINDFULNESS TRAINING ON SURGICAL STUDENTS' RESILIENCE AND PROFESSIONAL PERFORMANCE?

HOW DOES THE IMPLEMENTATION OF MANDATORY MINDFULNESS AND STRESS REDUCTION TRAINING IMPACT SURGICAL STUDENTS' PERCEIVED STRESS LEVELS AND PSYCHOLOGICAL WELL-BEING?

CONCLUSION

The integration of mandatory mindfulness and stress reduction training into the surgical curriculum at PCOM is imperative for promoting the well-being and resilience of future surgeons. By addressing the psychological challenges inherent in surgical education, this initiative would not only benefit students' mental health, but also enhance patient care and professional longevity within the surgical workforce.

The curriculum for this course would be designed to provide comprehensive education and practical skills aimed at enhancing psychological well-being and resilience. The course would include an introduction to the concept of mindfulness, its theoretical foundations and its relevance to surgical practice and the medical field in general. There would be engagement in experiential learning activities such as guided meditation sessions, mindful movement exercises, and reflective journaling to cultivate self-awareness and emotional regulation skills (Abdulghani, 2011).

Activities based on cognitive-behavioral techniques to address common stressors encountered in surgical training, such as performance anxiety, uncertainty, and work-life balance challenges would also be beneficial. Lessons on daily routines, both in and out of work, would be taught

Throughout the curriculum, emphasis would be placed on integrating mindfulness practices into daily routines, both inside and outside of the operating room, to promote sustainable well-being and professional growth. Interactive discussions, case studies, and role-playing exercises would be used to facilitate application of learned skills in real-life scenarios (United States Department of Education, 2023). Evaluation of student progress and outcomes would be conducted through self-assessments and peer feedback. Overall, the curriculum would provide a comprehensive framework for surgical students to develop the mindfulness and stress management skills necessary to thrive in the demanding environment of the medical field.

REFERENCES

Abdulghani, H. M., AlKanhal, A. A., Mahmoud, E. S., Ponnamperuma, G. G., & Alfaris, E. A. (2011). Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia. Journal of Health, Population, and Nutrition, 29(5), 516–522. https://doi.org/10.3329/jhpn.v29i5.8906

Acharya, J., & Sahani, S. (2022). Coping up with stress as a medical student. JNMA; Journal of the Nepal Medical Association, 60(248), 416–418. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9252254/

Aedh, Dr & Elfaki, Nahid & Ahmad, Itedal. (2015). Factors associated with stress among nursing students (Najran University - Saudi Arabia). Nursing diagnosis: ND: the official Journal of the North American Nursing Diagnosis Association, 4.33-38. https://www.researchgate.net/publication/307598217_Factors_associated_with_stress_among_nursing_students_Najran_University_-_Saudi_Arabia

Association of American Medical Colleges. (2024). Dealing with Pre-Med Stress. https://students-residents.aamc.org/applying-medical-school/dealing-pre-med-stress

Greeson, J.M., Toohey, M.J., & Pearce, M.J. (2015). An adapted, four-week mind-body skills group for medical students: reducing stress, increasing mindfulness, and enhancing self-care. Explore, 11(3), 186-92.https://www.researchgate.net/publication/272522924_An_Adapted_Four-Week_Mind-_Body_Skills_Group_for_Medical_Students_Reducing_Stress_Increasing_Mindfulness_and_Enhancing_Self-Care

Neufeld, A., Malin, G. (2021). How medical students cope with stress: a cross-sectional look at strategies and their sociodemographic antecedents. BMC Med Educ 21, 299 (2021). https://doi.org/10.1186/s12909-021-02734-4

Obbarius, N., Fischer, F., Liegl, G., Obbarius, A., & Rose, M. (2021). A Modified Version of the Transactional Stress Concept According to Lazarus and Folkman Was Confirmed in a Psychosomatic Inpatient Sample. Frontiers in psychology, 12, 584333. https://doi.org/10.3389/fpsyg.2021.584333

Philadelphia College of Osteopathic Medicine. (2024a). Professional development grants for recent alumni. https://www.alumni.pcom.edu/s/1816/21/interior.aspx?sid=1816&gid=2&pgid=1309

Philadelphia College of Osteopathic Medicine. (2024b). Student counseling mental health and wellness. https://www.pcom.edu/student-life/student-affairs/counseling/

Polle, E., & Gair, J. (2021). Mindfulness-based stress reduction for medical students: a narrative review. Canadian Medical Education Journal, 12(2), e74–e80. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8105581/

Windsor University School of Medicine. (2021). How Can Medical Students Cope With Stress During Medical School. https://www.windsor.edu/how-can-medical-students-cope-with-stress-during-medical-school/#:~:text=Whether%20you%20like%20swimming%2C%20hiking,for%20some%20simple%20exercise

United States Department of Education. (2023). Student Support and Academic Enrichment Program. https://oese.ed.gov/offices/office-of-formula-grants/safe-supportive-schools/student-support-and-academic-enrichment-program/?utm_content=&utm_medium=email&utm_name=&utm_source=govdelivery&utm_term=

Yousafzai, Abdul & Ahmer, Syed & Syed, Ehsan & Bhutto, Naila & Iqbal, Saman & Siddiqi, Muhammad & Zaman, Mohammad. (2009). Well-being of medical students and their awareness on substance misuse: A cross sectional survey in Pakistan. Annals of general Psychiatry, 8(8). https://www.researchgate.net/figure/Factors-causing-stress-among-medical-students_fig1_24026278