Mindfulness Training in the GME Setting: Ways and Means to a Mindful Resident

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Introduction

With reported rates of resident burnout ranging from 50%-70%, it is crucial to focus on preventive as well as mitigative measures to combat this ubiquitous phenomenon, especially in light of the dramatic shift in care paradigms in the era of COVID. Mindfulness based stress reduction (MBSR) and mindful practice are often used to strengthen attention, emotional regulation, and self-awareness in an effort to improve overall self-regulation. Studies in MBSR and other meditation practices have shown evidence for structural changes in the brain in relation to both cortical thickness and hippocampal volume. Additionally, other studies have demonstrated mindful therapies lead to improvement in cognition and emotion, physiologic alterations related to transmission in brain areas such as the anterior insula, and gray matter, lead to improvement in cognition and emotion, physiologic alterations related to transmission in brain areas such as the anterior insula, and gray matter.

Mindfulness Based Stress Reduction

Mindfulness has been recognized as a potential asset with regard to reducing burnout, enhancing resident trainee well-being and increasing resiliency. Mindfulness involves “cultivating our ability to pay attention in the present moment as we suspend our judging.” While daily meditation is likely to be more effective in reducing stress or promoting a more mindful lifestyle, this may not be viewed as efficient or practical for resident physicians. Mindfulness based stress reduction courses and their video counterparts have the benefits of providing a robust introduction to common mindful techniques and ongoing opportunities to understand and implement skills over a longer period of time. A 2015 meta-analysis by Gu et al. of the mechanisms of mindfulness based cognitive therapy and stress reduction courses showed significant changes with the augmentation of cognitive and emotional reactivity and some benefit for increasing mindfulness and reducing worry and ruminations. Limited efficacy was noted at that time for psychological flexibility and self-compassion. MBSR courses generally have the following characteristics:

- Varied schedules
- Generally 6-8 weeks in length
- Time commitment up to 30 hours total
- Often outside the workplace, retreat style courses
- Cost and time intensive

Hoenders et al. (2016) demonstrated that a full MBSR course instituted with psychiatry trainees yielded increases in empathy with a decrease in perceived stress. Although, a decrease in perceived stress was noted at that time for psychological flexibility and self-compassion. The limited power of the study hindered the ability to detect significant changes however the authors reported improvements in scales for both mindfulness and self-compassion. Benefits of this study demonstrated the feasibility of implementing such a curriculum in residency training.

Goldhagen et al. in 2015 at Duke implemented a mindfulness based resilience intervention of two to three 1-hour sessions for family medicine, psychiatry and anesthesia residents. Results showed limited short term benefit for stress, burnout and mindful-awareness but indicated some benefit for female residents as well as PGY1 and 2 residents who perceived their residency to be stressful.

Discussion

At this stage, the research of mindfulness training in residency is generally under powered, relying heavily on self reporting, is often unblinded and without a control population. When integrated into resident education, mindfulness training has the potential to provide the support and stress reducing resiliency augmentation residents greatly need. With appropriate attention paid to program culture and trainee routines, residents can work with their residency administration to pinpoint the what, when, and how of efficiently integrating mindful practice into their education.

Smartphone Applications

Two studies to date have assessed the feasibility of a smartphone based intervention, increasing the accessibility and usability of a mindfulness practice for residents at a manageable cost with the capacity to still provide some benefit.

- Wen at al. in 2017 assessed the benefits of using a smartphone based mindfulness application for wellness in general surgery, anesthesia, and obstetrics and gynecology residents over a period of four weeks. In spite of the limited generalizability and controls, significant improvements were noted in both mindfulness and positive affect.

- Taylor, Hagenan and Brown in 2016 covered the use of a smartphone application in pediatric residents over a 10 day period. Afterwards, residents completed burnout and mindful attention scales either independently or as part of a scheduled didactic period. Significant improvements were noted in both the utility of mindfulness based approaches both in the residents themselves as well as noting possible benefits for their patients. Additionally, higher levels of burnout were also observed in PGY2 residents.

Somatic | Psychological | Interpersonal
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- Exhaustion | - Depression | - Distancing
- Fatigue | - Irritability | - Avoiding patients
- Headaches | - Anxiety | - Short interviews
- Gastrointestinal | - Rigidity | - Decreased eye contact
- Insomnia | - Negativism | - Derogatory labels
- Shortness of breath | - Cynicism | - Decreased work effectiveness
- Decreased work effectiveness | - Lack of curiosity
- Family/marital stress | - Suicide attempts
- Decreased poster presentation performance | - Drug and alcohol use
- Divorce

References