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COMMENTARIES: MINDFULNESS IN UNDERGRADUATE MEDICAL EDUCATION: WHERE WE ARE NOW AND WHERE WE GO NEXT

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Doctors across the globe have been under huge pressures and faced many challenges recently. In the UK, the recent junior doctor strikes have further highlighted the level of discontent among medical professionals. It is therefore not surprising that medical students experience high levels of anxiety and mental health problems upon entering their chosen profession (Rotenstein et al., 2016).

Undergraduate medical curricula recognise the need to support medical students' wellbeing and resilience in order to prepare them for the challenging years after graduation. Mindfulness meditation is one of the recognised approaches for improving wellbeing and reducing burnout among medical students and doctors (Daya and Hearn, 2018). The concept of mindfulness has been around for thousands of years as it originates from Buddhist tradition; however, mindfulness interventions are secular practices that focus on strengthening our psychological ability. Mindfulness has been defined as a capacity for enhanced and sustained moment-to-moment awareness of one's own mental and emotional state and being (Siegel et al., 2008). Increased self-regulation of attention, emotions, and self-awareness have been proposed to be the underlying principle of its positive effects (Tang et al., 2015). In 1970s, Jon Kabat-Zinn developed a first mindfulness-based intervention [Mindfulness-based stress reduction (MBSR)] and has been described as a father of modern mindfulness practice. Initially created to help people living with chronic stress in USA, structured mindfulness practice spread widely and has been used in both clinical and non-clinical settings.

Mindfulness-based interventions (MBIs) range from structured and established courses such as MBSR, mindfulness-based cognitive therapy (MBCT), mindful practice curriculum (MPC), and other practices such as mindful eating, mindful movement, or breathworks. The key feature of

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effective MBIs is its application to the audience. For example, mindfulness course for patients living with obesity needs to be tailored to particular challenges and stressors faced by them in order to be clinically meaningful. Similarly, MBIs for medical students or postgraduate doctors must be designed so that they cover topics such as medical errors, compassion fatigue, dealing with difficult conversations, and death.

There is a growing evidence base supporting the use of MBIs in the medical school curriculum. The first systematic review (2017) on the use of MBIs in medical education found mixed evidence for reducing psychological distress in medical students (Daya and Hearn, 2018). The main limitations were the size and quality of the included studies, providing some insights into the mixed results. A 2018 study assessed feasibility of an online mindfulness meditation program for Canadian medical students (Danilewitz et al., 2018). Whilst the online mindfulness programme was feasible, it did not show any statistical differences in the outcome measures. However, it was not powered to find any difference in the outcome measures due to its nature as a feasibility study. The main challenge was an adherence to regular mindfulness practice due to time pressures and stress (Danilewitz et al., 2018). A 2020 pilot Australian study assessed online mindfulness programmes and found a significant increase in self-compassion and reduction in stress at 4 months. However, this programme had no control group, and only half of the medical students used the mindfulness intervention at least once a week (Moore et al., 2020). The latest systematic review and meta-analysis assessed randomised controlled trials focusing on the effect of MBIs on stress among medical students (Hathaisaard et al., 2022). Results from 689 students showed significant reductions in stress both immediately and 6 months after intervention (Hathaisaard et al., 2022). Similar intervention effects were seen across different countries, and it provides high-quality evidence supporting use of MBIs in the undergraduate curriculum.

So where to go from here? How can we introduce MBIs to our medical school curriculum so that doctors of the future can benefit? Which mindfulness programme is the best? There are no clear answers to these questions, and many challenges lie ahead before we see MBIs fully incorporated into undergraduate medical curricula. For example, it is tricky to define the minimum daily time spent on mindfulness practices ("the daily dose") and as such difficult to identify what is the gold standard method of delivery. Provision of MBIs is dependent on skilled mindfulness teachers who ideally work in healthcare in order to understand the pressures felt by medical students. Another difficulty lies with adherence to the MBIs as high attrition rates have been described in the studies for both in-person and online MBIs (Alrashdi et al., 2023). This can be due to perceived lack of time, effort needed to practise regularly, or difficulties with creating new habits, but it is clear that mindfulness only works if it is actually practised.

Nevertheless, it is paramount that all educationalists and clinicians working with medical students (e.g., clinical supervisors and personal tutors) become familiar with the concept of mindfulness in an undergraduate medical curriculum in order to signpost students to MBIs as a potential source of support. Secondly, it is important to stay up-to-date with the changes in the landscape of medical education, especially as we will see MBIs weaved into the medical student's curriculum in order to equip them with skills supporting their wellbeing and resilience.

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REFERENCES

Alrashdi, D. H., Chen, K. K., Meyer, C., and Gould, R. (2023). A systematic review and meta-analysis of online mindfulness-based interventions for university students: An examination of psychological distress and well-being, and attrition rates. *Journal of Technology in Behavioral Science* doi: 10.1007/s41347-023-00321-6

Danilewitz, M., Koszycki, D., Maclean, H., Sanchez-Campos, M., Gonsalves, C., Archibald, D., et al. (2018). Feasibility and effectiveness of an online mindfulness meditation program for medical students. *Canadian Medical Education Journal 9*(4), e15–e25.

Daya, Z., and Hearn, J. H. (2018). Mindfulness interventions in medical education: A systematic review of their impact on medical student stress, depression, fatigue and burnout. *Medical Teacher 40*(2), 146–153.

Hathaisaard, C., Wannarit, K., and Pattanaseri, K. (2022). Mindfulness-based interventions reducing and preventing stress and burnout in medical students: A systematic review and meta-analysis. *Asian Journal of Psychiatry 69*:102997.

Moore, S., Barbour, R., Ngo, H., Sinclair, C., Chambers, R., Auret, K., et al. (2020). Determining the feasibility and effectiveness of brief online mindfulness training for rural medical students: A pilot study. *BMC Medical Education 20*(1):104.

Rotenstein, L. S., Ramos, M. A., Torre, M., Segal, J. B., Peluso, M. J., Guille, C., et al. (2016). Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: A systematic review and meta-analysis. *JAMA 316*(21), 2214–2236.

Siegel, R., Germer, C., and Olendzki, A. (2008). *Mindfulness: What is it? Where did it come from? Clinical handbook of mindfulness*. New York, NY: Springer.

Tang, Y. Y., Hölzel, B. K., and Posner, M. I. (2015). The neuroscience of mindfulness meditation. *Nature Reviews Neuroscience 16*(4), 213–225.