


Editorial

Well-being and burnout in medical students: challenges and solutions

D. Bhugra¹ and A. Molodynski^{2,3} 

¹Professor Emeritus, Mental Health & Cultural Diversity, IoPPN, Kings College, London SE5 8AF, UK, ²Oxford Health NHS Foundation Trust, Oxford, UK and ³Oxford University, Oxford, UK

Abstract

Medicine (like many others) can be an extremely stressful profession. The pressures faced by clinicians are often related to 'life and death' situations that can lead to high levels of stress and distress. Students and trainees in a variety of allied health professions face similar pressures related to study or work environments. The practice of medicine continuously evolves and changes, and so too do the pressures. If the correct support is not accessible, this can result in burnout. Medical students are generally at a vulnerable stage in life (18–24 years) when they are more likely to develop mental health problems. A recent focus on the mental health and well-being of medical students has highlighted various worrying trends with a series of studies from around the world highlighting surprisingly high rates of stress and burnout among medical students, and fairly similar contributory factors. Despite the challenge of defining and measuring burnout, these studies indicate an urgent need for changes in methods of teaching, alongside rapid access to support. In this editorial, we make some proposals that could help the next generation of doctors to look after themselves and their patients. Medical schools have a moral and ethical obligation to ensure the well-being of their students in these stressful times.

Keywords: Burnout; medical students; stress; interventions; medical schools

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Introduction

We believe that there are several important reasons for safeguarding the mental health and well-being of medical students. First, they are at an epidemiologically vulnerable age where three-quarters of psychiatric disorders start. Second, they are a huge part of the future of healthcare delivery. Third, the practice of clinical medicine is complex with daily advances in investigations and treatments. This makes it difficult to keep up and adds pressure. All students may suffer loneliness and isolation after having left home for the first time and given up or lessened relationships and friendships. This is exacerbated for medical students by the frequent need to travel around 'on placement' to different areas or towns. Furthermore, pressures to choose specialities at an early stage can increase anxiety and fear of failure. Medical students are typically academically bright and high academic achievers at school but then come together at medical school and become more 'average' amongst peers. The multiple exams and their often-competitive nature add to cumulative stress and reduce the ability to take time out for other activities. Debt, parental and family expectations, poor quality housing, and perfectionistic personality traits can add to the stress being experienced by students.

Burnout has been characterised as occurring due to stress in the work place and can be debilitating and pervasive. It can prevent an

individual from concentrating on work, duties, and general functioning. Pressures on healthcare staff globally in these pandemic dominated times have highlighted such problems. It might be argued that using the term burnout may downplay the seriousness of students' difficulties and narrowly put the blame on the learning or working environment rather than other vulnerability factors. In recent years, there has been increasing concern regarding medical students and their mental health and well-being.

Originally described by Freudenberger (1974), burnout has three major components: exhaustion, disengagement, and depersonalisation. Exhaustion can be emotional, physical, or (as is so often the case) both. It may be accompanied by a sense of depersonalisation where an individual feels tired and 'out of it' and consequently unable to generate empathy and develop relationships. There can also be a reduced or absent sense of personal accomplishment. These feelings can lead to depression and need to be differentiated from symptoms of stress which often lead to anxiety.

Potential causes

The practice of medicine can be very stressful whatever the discipline. Molodynski and colleagues suggested that high levels of stress when dealing with life and death situations can contribute to a poor sense of self-accomplishment on a daily basis (Molodynski *et al.* 2019). Increased administration tasks that eat into patient contact time can add to frustration and stress. Anxiety can follow and the alternation of high risk and high intensity work with mundane bureaucracy can create substantial tension in some individuals. This in turn can lead to physical and psychological symptoms of

Address for correspondence: Professor D. Bhugra, Mental Health & Cultural Diversity, IoPPN, Kings College, London SE5 8AF, UK. (Email: dinesh.bhugra@kcl.ac.uk)

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anxiety. Burnout itself may manifest with symptoms of anxiety, but sufferers are also likely to be in despair and have low mood. As the stress diathesis hypothesis describes, cumulative stress can lead to depression. This can feed into a vicious cycle where no praise is forthcoming and students and doctors may face complaints and abuse, especially in public healthcare systems.

Changing patient expectations can add stress as constrained resources may not allow optimal care. Unrealistic expectations of the therapeutic encounter from the media and internet can 'turbocharge' such dissonance. If medical students see their seniors under pressure, they may feel disenchanting. Technical developments, such as Artificial Intelligence (AI), may be extremely helpful in some medical specialties but create more problems in others. Anecdotal evidence suggests that medical students often feel challenged by technical advances. The increasing use of simulation is clearly positive in many ways but may result in issues by limiting 'fully genuine' contacts during medical school. Algorithm-based clinical decisions can be equally helpful but patients of course do not behave in the same way or like their algorithms so they are certainly not a solution for all.

Mundane routine work interspersed with complex urgent tasks can contribute to an increased likelihood of burnout, especially if the individual feels they have little autonomy. The individual may feel trapped and under constant pressure without facilities or opportunities to wind down, creating a 'perfect storm' to increase the risk of illness. Certain personality traits such as obsessive and perfectionistic traits (which are relatively common among doctors and medical students) can also contribute to burnout. A particularly difficult challenge for doctors and medical students is that of being supportive and empathic while also being technical and professional.

Stages of burnout

Three stages of burnout have been identified, though in reality they merge. The first stage of stress arousal can be identified by poor concentration, memory lapses, irritability, and anxiety. This may be followed by the second stage with avoidance, lateness, and social withdrawal when students do not attend their classes or wards. The third stage is characterised by anxiety, depression, apathy, and suicidal ideation.

Rates of burnout

Studies from different parts of the world using fairly similar methods have shown unexpectedly high rates of burnout among medical students. These countries included Brazil (Casteldelli-Maia *et al.* 2019), Canada (Wilkes *et al.* 2019; Wilkes *et al.* 2021), England (Farrell *et al.* 2019b), India (Farrell *et al.* 2019a), Italy (Volpe *et al.* 2019), Jordan (Masri *et al.* 2019), Morocco (Chellieh *et al.* 2019), New Zealand (Farrell *et al.* 2019c), Nigeria (Esan *et al.* 2019; Ayinde *et al.* 2021), Paraguay (Torales *et al.* 2019), and Portugal (Almeida *et al.* 2019). In a more recent series of surveys from more countries, similar findings have emerged from Georgia (Berdzenishvili *et al.* 2021), India (Phillip *et al.* 2021), Indonesia (Kloping *et al.* 2021), Iran (Ashrafi *et al.* 2021), Nepal (Kafle *et al.* 2021), and Russia (Chumakov *et al.* 2021). A note of caution is indicated as these studies are based on online surveys for which it is possible that those suffering are more likely to respond introducing potential selection bias. Reassuringly, systematic reviews by Chunming (Chunming *et al.* 2017) and IsHak (IsHak *et al.* 2013) have also suggested high rates of burnout among medical students.

Causative factors

The surveys mentioned earlier described four broad types of causative factor: relationships (with peers and parents), financial pressures, accommodation, and studies. Although overall reported stress was high in all countries, the exact nature of stressors did show variation.

In a qualitative study from the UK, the following five factors for burnout among doctors and medical students were identified (Bhugra *et al.* 2019):

1. Systemic factors: These included problems with structures and systems. Medical students felt that they were not seen as part of a team and felt that they were a burden on already over-burdened staff thus adding to a sense of low self-worth.
2. Occupational: Repeated brief rotations added to stress as well as not getting enough time to become embedded in teams.
3. Interpersonal factors: Difficulties in forming relationships as short rotations created difficulties and became stressors.
4. Environmental factors: Practical issues such as lack of work-space or base and poor access to rest and nutritious diet contributed to feeling unwanted and uncared for.
5. Sociocultural: Working out of context and not being aware of the culture of a ward or team added to the stress.

There are ongoing academic stressors throughout the whole of the medical student period with an ever increasing scholastic workload, competition to achieve high scores in order to get the right career pathway, multiple high stake examinations, and expectations of teachers and parents. In clinical years, unfamiliar environments, poor teaching, limited supervision and mentoring, and poor role models all affect functioning and engagement. As mentioned earlier, contributory personal factors include leaving home and consequently existing support systems with friends, siblings and parents. Lack of support and friendships in a new place can lead to isolation and loneliness and create a sense of alienation. Excessive use of alcohol and/or cannabis to cope with anxiety and exhaustion is common, though very variable across countries.

Consequences

Feeling exhausted and tired can lead to a number of negative outcomes such as medical errors that cause harm to patients (Dyrbye *et al.* 2010, West *et al.* 2009, Shanafelt *et al.* 2010). This can leave the individual feeling guilty and depressed and even suicidal (Dyrbye *et al.* 2008, Shanafelt *et al.* 2011). It has been suggested that burnout affects clinicians' empathy (Wilkinson *et al.* 2017). It can lead to medical students' missing activities completely or them showing up late for ward rounds and teaching (Stevens 2016). There may be bursts of temper and clinical rage. Internalisation of anger and frustration may lead to depression and suicidal ideation. In addition, those affected may react poorly to criticism or negative feedback (Brotheridge and Grundy 2002). Burnout thus may alienate them further, and unless clinical and educational supervisors are aware of the condition and its impact, the issues can worsen and may lead to students leaving their courses.

What can we do?

Bargagliotti (2012) and Spence-Laschinger *et al.* (2009) have described the concept of engagement and contrasted it to burnout. Their argument is that engagement is a state of vigour and dedication. Engagement and resilience go hand in hand, with resilience being the

ability of an individual to adapt to change and stress and manage it in a way that does not cause harm to themselves or others.

Strategies to prevent burnout and deal with it need to be seen at three levels: personal, organisational, and institutional and governmental.

At the governmental level, there must be clear policies to support students and staff. Medical schools must be supported in looking after medical students' mental health needs and well-being. Appropriate occupational health services should be adequately and sustainably funded. Regulatory bodies must also play a role. Educational authorities must ensure that their resources for student support are sufficient and appropriate and easily accessible.

At the organisational level, it is important that support systems are both readily available and advertised widely. Confidentiality in these services is crucial. Institutional policies must recognise and prioritise the well-being and mental health of students, and staff and students should be empowered to set up well-being programmes and offices. Well-being guardians may be appointed and better communication must be encouraged. Prevention of bullying, harassment, and discrimination is a must both in policy and in action. Zero bullying policies and actions must be implemented. Many universities and medical schools have departments of education and occupational medicine, and these could (and often do) form the core of any programme to develop and deliver mental health and well-being support.

At an individual level, medical students must be helped to understand how to look after themselves, their health, and their mental well-being as part of their curriculum. The importance of basic things such as good sleep, exercise, and good nutritious food cannot be over-emphasised. Access to decent food and rest facilities are a crucial responsibility of medical schools and NHS providers who train students and have been long neglected. Students can be encouraged to be aware of and develop their own strategies for preventing burnout such as physical exercise, listening to music, reading books, yoga, meditation, spending time in nature, and mindfulness. Time and space must be carved out for students to recognise and identify their stress and then manage it before it becomes a problem. Recognising one's own weaknesses and vulnerabilities as well as strengths can only help an individual to become a better and more empathic doctor. Peer support and belonging to professional organisations to gain a collective voice can help. Career advice and encouraging students to develop a portfolio of interests can help. These can be a mixture of academic, teaching, political, managerial, or policy development activities.

It is important to bear in mind that solutions will have to be modified according to cultural variations and resources. It is important that medical students' well-being is an essential part of their curriculum and that they are taught to look after themselves so that they can look after others.

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