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Burnout in trauma and orthopaedic surgeons: can the UK military stress management model help?

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Abstract
The recent coronavirus disease (COVID-19) pandemic has increased doctors’ stresses at work and at home, putting them at increased risk of burnout. Considering this, we recently conducted the British Orthopaedic Association (BOA) Burnout and Wellbeing Survey which showed that, from 1298 respondents (approximately 25% of the membership of the BOA), 40% reported burnout and a further 50% were just below the threshold. The burnout rates were found to be higher in Black, Asian and minority ethnic (BAME), female and LGBTQ+ groups (45.6%) compared to white, heterosexual males (33.6% - p < 0.001) and also higher in trainees (49.1%) and associate specialists (52.1%) compared to consultants (35.7% - p < 0.001). We discuss what can be learned from the experience of the UK Armed Forces in their programme for stress management, their mental resilience training and their campaign to destigmatize mental wellbeing, that may mitigate burnout in our profession. We also put forward the case for appropriate resources to be allocated to tackling burnout in orthopaedic doctors and introduce the BOA’s Wellbeing Initiative.

Keywords
British Orthopaedic Association; burnout; COVID-19; mental health; military; orthopaedic; stress; surgeon; trauma; wellbeing

Burnout is not a new concept. First defined by Freudenberger in 1974, the appreciation and awareness of burnout in doctors has long been established. However, with the arrival of coronavirus disease (COVID-19) and the consequent added stresses at work and home, burnout has been thrust to the forefront.

Burnout has been defined as ‘a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding’. High levels of burnout have been shown to increase medical errors, reduce job satisfaction and push doctors in to early retirement. Burnout also impacts doctors, general wellbeing with higher rates of depression, alcoholism and suicidal ideation.

In the UK the NHS has been aware of this problem for some time, and has responded to the Boorman Report (2009) on this topic via NHS Employers, and subsequently produced the NHS Health and Wellbeing Framework in 2018. They placed on their website a series of 20 recommendations; the current pandemic has meant that implementation of many of these recommendations has been piecemeal at best. The document is complex and time consuming to absorb, with over 100 pages of detailed graphics filled with information.

Addressing health and wellbeing in trauma and orthopaedics as a specialty is going to be essential in the ongoing return to routine elective surgery. An estimate of 1.4 million hip and knee replacements on waiting lists within the NHS was based on estimations to November 2020, and, as we move towards the middle of 2021 at the time of writing, we are barely out of the latest national lockdown, let alone back to normal orthopaedic elective operating capacity. This upcoming ‘campaign’ to alleviate the backlog will potentially take a heavy toll on a specialty which is already battling with high levels of burnout.

The recent British Orthopaedic Association (BOA) Burnout and Wellbeing Survey, conducted by the authors, had 1298 respondents, approximately 25% of the membership of the BOA. It demonstrated that of the respondents, 40% had Copenhagen Burnout Inventory scores of over 50, that is, the respondents were suffering with burnout. A further 50% of respondents were just below this threshold with CBI scores of between 25 and 50, which is in keeping with other published literature.

In March 2020, the British Medical Journal published a paper that highlighted the mental health challenges faced by healthcare workers as a result of the current COVID-19 pandemic. It made the clear observation that many will face issues of moral injury which, although not a mental health illness, may lead to the development of negative thoughts that in turn...
can contribute to the development of mental difficulties such as depression, post-traumatic stress disorder (PTSD) and suicidal ideation. Pair a high-pressure job with a workforce that is unlikely to seek support or treatment in times of difficulty, such as surgeons, then the conditions are ripe for burnout to ensue.\textsuperscript{25}

Burnout has consequences such as reduced emotional and physical wellbeing, absenteeism, and personnel turnover. Naturally this can have substantial costs not just for individuals, but for organizations both short- and long-term. It is worth noting therefore that burnout can be ‘contagious’ and has the ability to spread throughout individual units and organizations. A single individual who may be experiencing stress and feel out of control of their situation can quickly create a net negative attitude change in a department or team. This is a well-studied but poorly quantified phenomenon and can include the protagonist forming well-founded or strong arguments upon which to hang their frustration, with empathetic colleagues fairly easily becoming swept up with the negative feelings.\textsuperscript{26}

The levels of stress experienced by trauma and orthopaedic teams in their response to the aftermath of the pandemic, on top of having worked tirelessly throughout the pandemic in providing trauma care as well as supporting other departments, will be significant. The two senior authors, therefore, contemplated whether their experience of how the UK Armed Forces (UKAF) instituted a stress management programme for all service personnel might be an appropriate starting point to help mitigate the stresses that will undoubtedly ensue in the coming weeks, months or even years.

Concerns regarding the mental health of service personnel involved in conflicts in Iraq and Afghanistan became more pronounced as these became enduring operations.\textsuperscript{37} In 2007, the Second Sea Lord approved a policy to govern the management of post-operational stress for members of the Royal Navy and the Royal Fleet Auxiliary. The rest of the UK Armed Forces (UKAF) soon followed, and a standardized approach was adopted across UK armed forces known as Post Operation Stress Management (POSM), which incorporated Trauma Risk Management (TRiM).

These approaches were devised at King’s Centre for Military Health Research and the Academic Department of Military Mental Health at King’s College, London to provide ongoing monitoring and support for soldiers, sailors and airmen at all ranks and in all positions during operational deployment. These systems are still implemented currently and provide a well-accepted source of support for service personnel.

Much of the effectiveness of these risk management strategies comes down to the willingness of the individual to accept the support. The support extends to the families of the service personnel, with points of contact in the unit’s welfare structure, informative brochures and helplines.

The POSM process begins prior to deployment and it takes the form of a series of briefings to destigmatize both the normal responses to stress, and to educate on the prolonged and potentially abnormal responses to stress. The information from these pre-deployment briefings is reiterated to individuals not only as they prepare to leave their deployed environment and start their journey home, but also upon returning to the UK and later again, at a 6–12 week interview. There is a mandated period of normalization during the post-operational leave period, during which time individuals are supposed to take leave with their family and loved ones in order to adjust back into life in the UK - their ‘new’ normal.

TRiM is a peer-delivered risk assessment and support system designed to identify and support individuals who may be at increased risk of developing mental health problems following a traumatic event.\textsuperscript{28} Implementation involves an assessment, ideally within a few days of the traumatic event, then a repeat assessment approximately 28 days later. It is the individual’s response at this follow-up assessment that can help to identify if normalization is taking place or if referral for further support and help is required.

As discussed above, high levels of burnout are seen in trauma and orthopaedics in the UK, and these were present even before the current pandemic. The literature would suggest that, if not managed correctly, healthcare workers will suffer prolonged psychological injury and poorer mental health as a result of further exposure to potential traumatic and stressful events in the aftermath of the COVID-19 pandemic. However, the evidence within the literature would also suggest that, managed well, it is not uncommon for those involved in such traumatic experiences to experience post-traumatic growth.\textsuperscript{29} These individuals often experience a renewed appreciation for life and a sense of self-worth. This requires organizations to provide appropriate support to enable the three pillars of psychological resilience to flourish. Firstly, individuals need to be appropriately trained to handle the situation within which they find themselves: they need to feel adequately experienced and this gives rise to the perception of competence to handle the traumatic events. Secondly, they need to have adequate social support. Support from family, friends and/or the workplace has frequently been associated with resilience. Thirdly, having effective coping strategies appears to be important in developing psychological resilience. These skills can be taught and encouraged by organizations in their preparedness training.

TRiM has been employed in several institutions other than the military, with established services in Hampshire fire brigade and NHS Cumbria for example. Northampton General Hospital have also reported an expansion of their Staff support service (modelled on TRiM methodology) as a result of the additional strain of the COVID-19 pandemic on personnel, seeing an increase from only one or two TRiM referrals per month, to an average of one referral per day (https://www.england.nhs.uk/nursingmidwifery/shared-governance-and-collective-leadership/nursing-covid-19-catalogue-of-change/supporting-staff-through-trauma-risk-management/).

A further peer support programme has been developed by Professor Greenberg’s group, based around the same concept of peer support seen within TRiM. There is a small training requirement lasting 2 days. The results published in the literature to date seem encouraging.\textsuperscript{30}

If we as a specialty are to meet this inevitable challenge in a properly prepared state, then this will require appropriate resources being made available. As demonstrated in the literature above, this will be a small cost in comparison to the wider losses incurred due to the financial burden of physician burnout. A study from the USA estimated costs on a national scale. The
conservative base-case model estimate was that approximately $4.6 billion in costs related to physician turnover and reduced clinical hours were attributable to burnout each year in the USA. This estimate ranged from $2.6 billion to $6.3 billion in multivariate probabilistic sensitivity analyses. At an organizational level, the annual economic cost associated with burnout related to turnover and reduced clinical hours was approximately $7600 per employed physician each year. This can be extrapolated roughly to a cost of $900 million or £665 million in the UK per annum based on approximately 120,000 NHS doctors.

Conclusion

The BOA Wellbeing Initiative has started in response to the BOA Burnout and Wellbeing Survey in early 2021 and is working to provide resources and training in the personal, team and organizational realms for all healthcare workers looking after patients within the trauma and orthopaedic departments in the UK. Changing the way we work to a culture of compassion is more appropriate for the diverse society in which we all live. It is demonstrated in our survey data and the literature from the USA that microaggressions are a significant driver of workplace disharmony. We believe that addressing this, utilizing tools such as those outlined in this article will improve the significant high burnout rates in our departments across the UK. The full results of the BOA survey are available with an accompanying infographic online.

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