

# Resilience and surgeons: train the individual or change the system?

We investigate both sides of the coin.

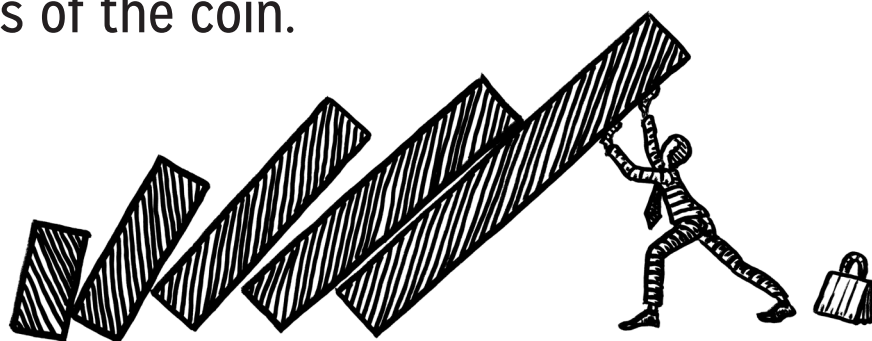
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Recent years have seen a surge in interest in the study of resilience in medical professionals. Concern has been expressed about the psychological wellbeing of doctors in general and of surgeons specifically, with increasing individual doctors' resilience being suggested as a possible solution.<sup>1</sup> However, there are potential risks as well as benefits to this focus on individual resilience. This article explores both sides of the resilience coin, and considers potentially helpful ways of addressing psychological wellbeing and resilience in surgeons, including the development of an Acceptance and Commitment Therapy-based intervention.

The American Psychological Association has defined resilience as 'the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress'.<sup>2</sup> More simply, it has been conceptualised as the ability to bounce back.<sup>3</sup> In early research, resilience was characterised as an innate, fixed personality trait that was protective against illness and distress.<sup>4-6</sup> Modern perspectives suggest that it does not

confer immunity to adverse experience but rather describes the ability to maintain wellbeing and recover in the face of challenges.<sup>2,6,7</sup> It is now widely accepted that resilience is a dynamic process that can fluctuate with context, life circumstances and age.<sup>2,4,6</sup> This is important because it suggests that resilience may be malleable and might therefore be developed through intervention.

Resilience is arguably a key construct in maintaining mental health and general wellbeing.<sup>7</sup> For example, in the general population, resilience is associated with lower levels of anxiety and distress following adverse events.<sup>7-9</sup> Resilience also plays a key role in workplace functioning, with positive intervention outcomes being related to employee wellbeing and engagement.<sup>10</sup>

## RESILIENCE, DOCTORS AND SURGEONS

Resilience in the context of workplace functioning and wellbeing is of particular importance for doctors, who frequently experience high levels of occupational burnout and poorer mental health outcomes, both of

which can negatively affect patient care.<sup>11,12</sup> Despite a widespread view in the medical profession that doctors should possess an inherent heightened mental robustness to manage the highly stressful nature of their work,<sup>13</sup> findings from several studies indicate that medical professionals commonly report relatively low resilience, which often correlates with adverse outcomes for doctors in terms of burnout and for patients in terms of quality of care.<sup>14,15</sup> Similar findings have also been reported in relation to medical students when compared with matched peers in the general population.<sup>16</sup>

It can be argued that resilience is especially relevant to surgeons. There is a small amount of evidence that surgeons may be particularly stress immune<sup>17</sup> but findings from larger studies utilising more mainstream psychometric measures suggest that surgeons are no more resilient than the general population and indeed, may be less so (eg Turner *et al.*, 2020, unpublished). At the same time, surgery is inherently challenging work that can involve long hours

with regular experiences of acute stress, and where surgical complications and errors are not unusual.<sup>18</sup> Experience of these kinds of adverse surgical events can have a significant negative impact on a range of mental and physical health factors including anxiety, sleep problems and alcohol use (Bolderston *et al*, 2020, unpublished).

Furthermore, it appears that surgeons rarely seek professional support or treatment when they do experience psychological difficulties.<sup>19</sup> For these reasons, surgeons' resilience, burnout and psychological wellbeing are increasingly the focus of discussion, and although there is broad agreement that levels of burnout and mental health problems are concerning, there is debate regarding an appropriate and effective way forwards.

#### **RESILIENCE: A DOUBLE-EDGED SWORD?**

Focusing on resilience locates the source of the problem within the individual, for good and for bad. It has been argued that for doctors, this approach 'shifts the blame and responsibility for doctors' struggles away from what are often over-politicised, understaffed, underfunded, badly organised systems and onto individuals'.<sup>20</sup> Consequently, there is a danger that focusing attention on whether surgeons have high or low personal resilience might serve to take attention away from the negative impact of detrimental working conditions, ineffective or harmful management strategies and inadequate support at times of professional difficulty.<sup>21</sup>

Additionally, employers, training organisations and professional bodies that provide resilience training might be well meaning but such training could also serve to absolve those bodies from the responsibility of making difficult (albeit necessary) changes to improve the working lives of surgeons. It should also be said that the impact of resilience training for medics is rarely tested empirically so it is unclear how effective most training packages are.

Another potential risk of rhetoric that emphasises the need for personal resilience is that this becomes yet another stick to beat surgeons with, that surgeons are given

the message by colleagues, managers and professional bodies (whether explicitly or implicitly) that they should not be struggling, that they should be resilient and that it is a personal failing if they are not. This belief certainly appears to be common in trainee surgeons' thinking about themselves.<sup>22</sup> Such views are rooted in a misunderstanding of the nature of resilience: no one can simply decide to be resilient. Nor is resilience a fixed trait that a surgeon has or does not have; even the most resilient individuals can still experience psychological distress at times. This is simply part of human experience despite the culture in the surgical profession perhaps suggesting otherwise.

For all of these reasons, some argue that resilience training is not an adequate response to current concerns about doctors' psychological health.<sup>21</sup> This is a view that is perhaps encapsulated by the title of a 2015 *British Medical Journal* article: *Doctors need to be supported, not trained in resilience*.<sup>23</sup>

#### **BENEFITS OF FOCUSING ON SURGEONS' RESILIENCE**

Notwithstanding these concerns, there are several reasons why focusing on surgeons' personal resilience could still be important. As outlined above, surgeons experience significant distress and mental health difficulties linked to their work.<sup>24-26</sup> Arguably, even if working conditions were significantly improved, surgery is inherently challenging, stressful and distressing at times, and so it is

perhaps several times during their career, and this may be a contributing factor to the high levels of post-traumatic stress reported in the profession (Turner *et al*, 2020, unpublished).

Given the evidence that surgeons are no more resilient than the general population (Turner *et al*, 2020, unpublished) and that some sources of work-related distress will be unavoidable for surgeons,<sup>18</sup> there is a need to address individual psychological health as well as work environment factors. Contemporary occupational psychologists support this approach, emphasising the need to consider both contextual and individual factors.<sup>28</sup>

Although a great deal more work is needed on the development of interventions that effectively support and build resilience, there is some relevant empirical evidence. In a systematic review and meta-analysis of randomised controlled trials (RCTs), Leppin *et al* found evidence of 'a modest but consistent benefit of resiliency training programs' for the general population.<sup>29</sup> However, the quality of studies was generally poor, with small sample sizes. In their systematic review and meta-analysis of resilience interventions for a broad range of participant groups, Joyce *et al* found particular support for interventions that included features of Cognitive Behavioural Therapy and mindfulness.<sup>7</sup>

Robertson *et al* conducted a systematic review of studies testing work-based resilience training interventions.<sup>10</sup> Resilience training was found to improve not only personal resilience but also employee mental health

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likely that surgeons would continue to be at increased risk of poor psychological health. For example, the majority of surgeons will experience patients dying perioperatively,<sup>27</sup>

and wellbeing more broadly. There were a number of reported wider benefits such as enhanced work performance, a reduction in fatigue and heightened general satisfaction.

Resilience training workshops are also beginning to be offered to medical professionals and in a few instances, some evaluation of the impact of those workshops has been carried out. For example, Tregoning *et al* reported generally positive feedback from 40 UK staff, associate specialist and specialty doctors who attended a one-day workshop.<sup>1</sup>

While this is encouraging, far more rigorous testing of such interventions is needed in RCTs designed to also shed light on mechanisms. One such example is a small scale pilot RCT that tested a stress management and resilience training programme for physicians in the US.<sup>30</sup> Significant improvements were reported for resilience, stress, anxiety and quality of life following the intervention, compared with a wait-list control group. Taken as a whole, the resilience intervention literature suggests that brief interventions may have something to offer, not only in terms of helping medics increase resilience and wellbeing at work but also more broadly in their lives.

### THE DANGER OF EITHER/OR THINKING

Simple either/or conceptualisations rarely capture the complexities of real-life human situations. The idea that psychological difficulties in surgeons are due wholly to local organisational and national systemic factors on the one hand or wholly to individual factors on the other hand is an oversimplification. Similarly, we would argue that an effective response to surgeons' psychological difficulties does not rest solely at the organisational/systemic level or at the individual level. In our opinion, two things are true at the same time:

1. Some sources of stress and distress could (and should) be addressed organisationally, systemically and/or culturally, as appropriate.
2. However, even if working conditions improved significantly, surgeons still do extraordinarily challenging work that carries a high potential for stress and trauma, and surgeons have typical human frailties and coping strategies. We therefore also need to help surgeons

build their capacity to recover when they inevitably have distressing and traumatising experiences at work.

As an analogy, there is overwhelming evidence that poverty contributes significantly to the development of mental health problems in the general population.<sup>31</sup> Does this mean that we should not offer individual treatment to those who develop mental health problems and that we should instead only focus on political/social/economic solutions? Most patients, clinicians and campaigners in the field would argue against this stance. For one reason, change at an organisational or cultural level tends to be slow unless prompted by disaster or significant top-down pressure and support – the difference between evolutionary and revolutionary organisational change.<sup>32</sup> Meanwhile, as slow improvements on a large scale may or may not be happening, individuals continue to suffer.

### PRACTICAL AND EFFECTIVE WAYS FORWARDS

We would consequently argue that surgeons and those individuals and organisations concerned with their psychological wellbeing should campaign for and work towards appropriate improvements in working conditions, management, support and professional culture. At the same time, contextually sensitive resilience training programmes for surgeons should be developed and tested.

### ACT: A GOOD CANDIDATE FOR THE JOB?

One possible source of contextually sensitive resilience training for surgeons is Acceptance and Commitment Therapy (commonly referred to as acceptance and commitment training when adapted for occupational settings) (ACT).<sup>33</sup> ACT is a contemporary evidence-based psychological intervention designed to increase psychological wellbeing and reduce psychological suffering even in the presence of stress and psychiatric symptomology. It includes some features of Cognitive Behavioural Therapy as well as mindfulness-focused content.

ACT is rooted in a contextual behavioural theory of human experience, suffering and flourishing<sup>34</sup> so its 'unit of focus' is the

individual within his or her context. For this reason, ACT lends itself to a conceptualisation of resilience as an individual/context transactional process. From a behavioural perspective, resilience is dynamic and as we do not exist in a vacuum, it is influenced by internal contexts such as biology and learning history as well as external contexts including people, organisations, systems and culture. ACT occupational interventions therefore focus on the individual while acknowledging the impact of external contexts, an approach that seems likely to be a good fit for surgeons.

As the name suggests, ACT has a focus on developing acceptance, conceptualised as the willingness and ability to 'make space for' difficult experiences, thoughts and feelings without becoming overwhelmed or dominated by them.<sup>33</sup> The opposite of acceptance according to the ACT model of psychopathology is experiential avoidance: the use of suppression, distraction and other such strategies in an attempt to block out or eliminate painful thoughts and feelings. Experiential avoidance tends not to be effective and is implicated in a wide range of mental health problems<sup>35</sup> including burnout in health settings.<sup>36</sup>

Given that it is inevitable that surgeons will have uncomfortable work-related memories, thoughts and emotions at times, it would seem important to help them develop the capacity to experience these in a safe and tolerable way rather than engaging in ineffective and even damaging experiential avoidance strategies (which can include over-working to the point of exhaustion, excessive alcohol use and other compulsive behaviours). We would suggest that acceptance skills form part of an effective, resilient response to challenging work experiences.

ACT also has a significant focus on personal values. An ACT occupational intervention for surgeons would not only encourage them to engage with questions such as 'What matters to me as a surgeon?' and 'What do I want to stand for as a surgeon?' but also to explore similar questions in relation to being a romantic partner, a parent, a citizen and so on. From an ACT perspective, it is important to help surgeons

connect with their life values beyond how they want to be as surgeons because when things go wrong in the operating theatre, a close connection with what is meaningful for them both within work and beyond work is likely to prove protective of their mental health. As with acceptance, this ability to engage meaningfully with personal values broadly in life could bolster resilience.

Finally, there is some empirical evidence that ACT occupational interventions (usually in the form of brief workshops) can increase psychological resilience and wellbeing, including for those in high demand jobs such as addiction counsellors.<sup>37</sup> However, to our knowledge, ACT has not previously been tested as a resilience intervention for surgeons. We have therefore developed a brief, one-to-one ACT intervention based on a well tested ACT occupational protocol.<sup>38</sup> Consisting of three two-hour sessions, the intervention has been tested in a small scale, uncontrolled feasibility/pilot study with trainee surgeons. All ten participants engaged with session content and completed the trial, and there were significant improvements in scores on self-report measures of resilience, burnout and common mental health problems.<sup>22</sup> Encouraged by these initial findings, we are currently testing the same intervention in a UK-based multicentre RCT that includes exploration of possible mechanisms.

If this more rigorous test of our intervention indicates that it can help surgeons enhance their resilience and psychological wellbeing, we would see it as a positive addition to a range of changes and strategies (individual, organisational, systemic and cultural) needed to enable surgeons to flourish at work.

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