



Pressure points

Dr Steven Yule and Dr John Tse discuss an acute problem that is chronically misunderstood

Workplace stress is difficult to define objectively but the intrinsic demands of the job, uncertainty, and conflicting demands all contribute. Professor Robert Karasek, one of the main theorists in this area, argues that high levels of demand on the individual coupled with low levels of control over their circumstances is likely to result in stress. An estimated 11.4 million working days were lost in Britain in 2009 due to work-related stress, depression and anxiety according to Health and Safety Executive (HSE) figures, and this was severe in enough cases to make an estimated 415,000 people ill.

There has been increasing focus on the negative effects of stress and burnout in surgery recently, partly due to the results of a large survey of 7,905 US surgeons published by Stanaflet and colleagues in *Annals of Surgery* volume 250. This revealed that over 40% were 'burned out', a psychological term for chronic emotional exhaustion and

diminished interest which affects performance at work and can undoubtedly make surgical care less safe for patients. Burnout is one of the most serious outcomes of chronic stress, but the effects of stress manifest themselves in many other discrete and subtle ways, and effective management of stress can enhance safety in the operating theatre and prevent the inevitable slide to burnout.

Stressors in the operating theatre

A systematic review of the literature on acute stress in surgery by Arora and colleagues, reported in *Surgery* volume 147, found 22 empirical papers in a somewhat disparate field with a mix of subjective (e.g. questionnaire) and objective (e.g. heart rate, salivary cortisol) measures of stress having been used by researchers working in the real operating theatre as well as simulated settings. This review revealed that the main stressors were the act of surgery itself; patient factors such

as unanticipated bleeding; noise; visitors, and distractions in the operating theatre. Laparoscopic surgery was found to be more stressful than open surgery. Stress has been shown to affect technical as well as non-technical performance and although no meta-analysis has been conducted in this area, experienced surgeons appear to be able to cope with stress better than juniors.

Acute vs chronic stress

There have been a number of different theories of stress posited in the field of psychology, with most current views resting on the idea that stress is an outcome of the interaction between the individual's personality and coping skills, and the environment. Environmental aspects include the perceived severity, frequency, and duration of stressors, and the resources available to provide support to individuals to cope with stress.

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The different stressors encountered in the surgical environment can be classified into either acute or chronic. Fundamentally, acute work stress covers reactions to immediate stimuli (stressors) triggered in the environment. Example stressors in the intraoperative phase of surgery include sudden patient bleeding during a resection of colon or being unable to clip the cystic artery during laparoscopic cholecystectomy. These stressors can trigger at any time and involve physiological, psychological, physical and behavioural reactions in response to the event. These reactions are relatively adaptive in the sense that they give the individual heightened alertness to deal with the situation in hand, although the positive effects of adrenalin cannot be sustained over time. Once the event has been resolved or has passed, the surgeon's reaction returns to normal. In comparison, chronic work stress relates to enduring reactions to stimuli which arise as part of the job over lengthy periods of time. For surgeons, this may be sustained long working hours, heavy workload, or work commitments which interfere with family life. As such, negative feelings generated from chronic stress are maladaptive if not controlled, since they have the potential to impact health and work performance in the long term.

The effects of stress

Although it is acknowledged that bursts of moderate stress can be beneficial for performance, sustained periods of overexertion where demand outweighs individual capacity or control can only lead to poor outcomes. Stressors are also appraised differently by different people – two individuals can react

quite differently when presented with the same stressor so it is important to consider the capabilities of the individual when tackling stress. Moreover, individuals may manifest different symptoms of stress. Cognitive symptoms include inability to concentrate and constant worrying. Emotional symptoms include irritability, feelings of being overwhelmed and depression. The effects of stress can also manifest as physical symptoms such as frequent colds, tachycardia, chest pains, and gastrointestinal problems. Behavioural symptoms include increased fatigue or disturbed sleep, neglecting of responsibilities, changes in appetite and increased dependency on drugs or alcohol. In terms of propensity to suffer from stress, it is likely to be more prevalent and problematic for surgeons who have certain personality dispositions, such as Type A (highly time driven, impatient, competitive, ambitious

with difficulty in relaxing), and a lack of coping skills (e.g. poor time management and inability to cognitively reframe thoughts). Those who work in a surgical unit where a number of stressors exist unabated, with little support or understanding from the organisation, are at most risk.

Recognising and managing stress

An easy and common approach to measuring work stress involves self-report measures such as questionnaires. From in-depth research and application, HSE have distilled the key sources of workplace stress and developed the Management Standards for work-related stress – six overarching areas for organisations wishing to improve the psychosocial work environment, measured via questionnaire. These involve:

- Demands (workloads, work patterns).
- Control (autonomy).
- Support (social support and resources provided by the organisation, managers and colleagues).
- Relationships (quality of relations with co-workers and managers).
- Role (how clearly roles and responsibilities are defined in the organisation).
- Change (how well organisational change is managed and communicated).

The Management Standards are aimed at managers, and allows them to build up a picture of organisation-wide stress levels, providing a framework that they can use to tackle the main sources of stress across a department or the whole organisation. However, the six areas may also be useful for the operating theatre team to reflect upon

when considering which aspects of the work environment could be changed to improve their own levels of stress.

Alternative methods of measurement include conducting a stress audit which involves all staff in listing potential stressors in their work environment (i.e. the operating theatre), and then ranking them by severity and frequency in order to highlight those that require attention. There are also questionnaires which allow individuals to consider life and work stressors together to judge the extent of their exposure. These commonly list moving house, family illness and Christmas or other celebration times as adding to workplace stressors. Once the level of stress being suffered has been identified, it can then be managed. The most effective stress reduction strategy is to eliminate stressors. Where this is not possible (as may be the case in the intraoperative environment), the next best approach is stressor reduction. Finally, it is also beneficial to equip individuals with the coping strategies through stress management training to reduce the impact of encountered stressors.

At an individual level, if you think you or a colleague is suffering from stress, share your feelings with others and do not be afraid to seek help or speak to your boss. Be assertive and discuss your workload commitments if necessary. Try to seek out and attend stress management training where possible and realise that acknowledging the feelings of stress is a strength rather than weakness. Another technique is to try to reframe how you view stressful situations and focus on the positive aspects of work. When you feel that it is not possible to control work-related stressors further then make sure you find time to relax; maintain social interactions outside of work; eat properly, and get adequate sleep. ●

Backstory

- Stress is common among surgeons and can be measured.
- Suffering from the symptoms of stress is not a sign of personal weakness – do not be afraid to seek support from colleagues and managers.
- Be mindful of the symptoms of stress in yourself and in colleagues, and ensure chronic and enduring feelings of stress are tackled before feelings develop into burnout.

About the authors

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