

Knowledge in Action – Issue 36

Technostress: mobile technology in the modern workplace

Work can be stressful. And modern mobile technology – smartphones, laptops, and tablet computers – bring the workplace into the home, the weekend, or the holiday. Attention spans can fragment, work-life balance is affected, and users of mobile technology can – literally – find it difficult to ‘switch off’. The result: technostress.

Researchers at Henley Business School studied the impact of technostress in a large public sector organisation. Their findings raise important questions not just for the organisation itself, but for organisations more generally, as mobile technology becomes increasingly pervasive in the modern workplace.



According to the Health and Safety Executive, work related stress in the UK costs the country more than £550 million each year. Around half a million people seek medical advice for stress, with a higher proportion being from public sector than from areas of the economy.

In recent times, advances in mobile technology have encouraged employers and employees alike to invest in devices such as smartphones, tablet computers, and laptops. Through such devices, goes the argument, it is possible to better support mobile working, improve productivity, reduce response times, and promote information sharing.

But there's also a downside: research suggests that mobile technology can all too easily invade employees' private life, generate work-home conflicts, create overload, and produce constant interruptions that fragment people's attention. Collectively, these are symptoms of what has been called technostress.

Professor Jane McKenzie, Dr Ana Graca and Johnny Jensen of Henley Business School examined the impact of mobile technology on the employees of a large public sector organisation presently rolling out a number of mobile technologies as part of a wider programme to change the way that work happens. Although the detailed findings of the study were applicable only to that specific organisation, the research nevertheless raised a number of important points for reflection, which will be of interest to a broader audience.

Stress is one of the main risk factors for coronary artery disease and is responsible for a fifth of heart attacks worldwide.

Source: Health & Safety Executive



Collaboration, insight... practical value

The insights into work-related technostress described here originated in a study carried out by Professor Jane McKenzie, Dr Ana Graça, and Johnny Jensen of Henley Business School during 2016 and 2017, examining the impact of mobile technology on the employees of a large public sector organisation.

The 'always on' culture

Technostress is real – and increasingly, it touches more and more of us in our daily lives.

The Oxford English Dictionary, for instance, defines technostress as 'stress or psychosomatic illness caused by working with computer technology on a daily basis'. Collins English Dictionary, for its part, defines the term as 'any mental stress caused by (too much) interaction with technology'.

How does that stress manifest itself? As with stress in general, sufferers of technostress may experience sleeplessness, raised blood pressure, an inability to concentrate, low energy levels, and a susceptibility to minor illnesses and infections.

The technostress associated with mobile technology can both exacerbate and add to this list. As mobile devices bring the workplace into the home, the weekend, or the holiday, work-life balance can suffer; users of mobile technology can find it difficult to 'switch off'; work-related stresses and pressures invade the home, blurring the safe boundaries between the two; people can become overloaded; and frequent interruptions can be distracting and tiring. Such symptoms are known as technostress predictors: employees experiencing them either are, or will be, suffering from technostress.

Technostress at work: how one organisation experienced technostress

Any responsible employer contemplating leveraging mobile technology to significantly alter employees working lives will wish to consider the effects of technostress, and seek to minimise it.

Partly, this will reflect their duty of care towards such employees. Clearly, too, a workforce that is characterised by overload, distractions, an inability to concentrate, and the physical effects of stress, will be unlikely to be working productively. That said, not all stress is bad: too low a level of stress, and performance may not be optimised. The optimum level of stress, studies show, occurs when pressure is moderate, and people are stretched but not overstretched.

Consequently, when rolling out a significant mobile technology programme, a large public sector organisation asked Henley Business School to measure the extent of these technostress predictors among the managers who were most affected by the rollout.

The objective: to assess how these predictors impacted perceptions of the contribution of mobile technology to performance and

job security, and to look at how any role overload coloured those perceptions. These three parameters in particular – perceived performance, perceived job security, perceived role overload – were chosen because they were expected to have a direct bearing on employees’ sense of well-being at work.

Accordingly, some 882 managers from the public sector organisation in question completed a survey that sought to identify indications of technostress, and probe how it impacted on employees’ performance and job security. The high level of response to the survey – some 54% of those who were asked to complete it, did so – was taken as indicating a high level of concern over the issue, and has also helped to raise general awareness of technostress within the organisation. As a sign of this, the term ‘technostress’ has itself become part of the language of the organisation.

And yet, it turned out that indicated levels of technostress – as identified by the survey – were moderate, and perceptions of the contribution of mobile technology to performance were generally positive.

While some managers had experienced mobile technology invading their private life, most had developed strategies to prevent it becoming too invasive, and reported that work-life balance and work-home conflicts were at a manageable levels. The most stressful part of a manager’s mobile technology use, it seemed, was the need to change work habits, while simultaneously dealing with the tight timescales and greater workload that mobile technology seems to generate.

Moreover, while most managers had developed strategies to keep work-home conflicts to manageable levels, middle managers – those

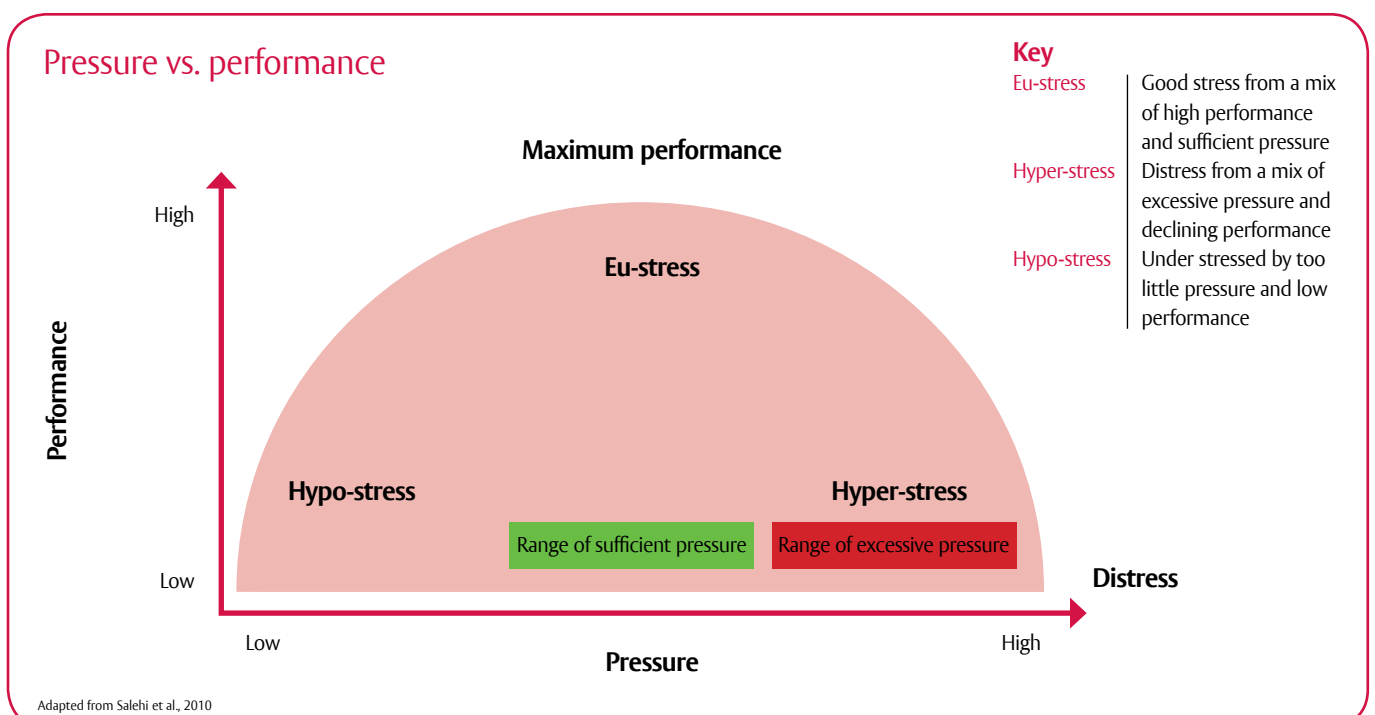
61% of managers say technology has made it difficult to switch off from work, with 54% saying they often check email outside working hours – and 92% of managers saying they work longer than their contracted hours.

Source: Worrall et al 2016



with 6 to 15 years of managerial experience – seemed to find mobile technology the most invasive.

And significantly, dealing with the constant distractions that mobile technology causes – ‘techno interruption’ – was felt to directly, and significantly, undermine the productivity and performance gains that mobile technology was supposed to deliver.



Mobile technology functionality is designed to attract attention, which interrupts other activities at random intervals, making it particularly disruptive and distracting. Smartphones are especially problematic in this respect.



That said, it had been expected that role overload – a well recognised source of general stress – would make it more difficult to realise the positive performance benefits that mobile technology promises. In fact, it appeared that managers generally welcomed mobile technology as a positive solution to their role overload, perhaps seeing a high level of work as a sign that they were doing their job.

Even so, it appeared that the degree of role overload that a manager was experiencing influenced this perception: when the level of overload is high, the perception of mobile technology's contribution to performance reduces.

Finally, although the performance enhancing benefits of mobile technology were generally seen as positive for managers who were experiencing overload, there were specific groups of managers for whom role overload added significantly to a sense that technology might be a serious threat to their job security. The older generation, and those who had been with the organisation for a long time, seemed to be most threatened by mobile technology, and so saw the fewest benefits in its deployment.

Questions for organisational reflection

Clearly, these results are representative of a specific organisational context. An organisation's history, structure, culture, and how change initiatives are rolled out, will all affect how transferable the findings are to other contexts.

More interesting for the general reader are not the individual organisation-specific conclusions of the research, but the broader patterns and issues identified by it. These raise important questions for organisational reflection. Any organisation contemplating how to respond to the implications of technology on workplace stress would benefit from considering the following five questions:

- How can those who are more confident in balancing the demands of work-home life share their strategies for managing their role overload and work-home conflict with younger and less experienced people?
- Similarly, how can managers who are more accomplished at managing the constant interruptions from technology share their strategies for doing this?
- What can the organisation do to manage the well-being of those who have served the organisation for the longest period, and who may feel more threatened by the need to adapt?
- Technology seems more disruptive in the middle years of a manager's career (6-15). How can this group be helped to switch off and reduce the disruption to their private life?
- The research found that a quarter of managers felt that mobile technology introduction significantly affected their chances of staying in their role, and hence they felt less positive about the benefits to their performance. What positive stories can be shared from those who use it all the time?

Health and Safety Executive (HSE) (2016) Work related stress, anxiety and depression statistics in Great Britain 2016. [Accessed 8 June 2017] www.hse.gov.uk/statistics/causdis/stress/stress.pdf

Salehi, B., Cordero, M. I., & Sandi, C. (2010). Learning under stress: The inverted-u-shape function revisited. *Learning & memory*, 17(10), 522-530

Worrall, L, Cooper, C, Kerrin, M, La Band, A, Roselli, A & Woodman, P (2016) The quality of working life. Exploring managers' wellbeing, motivation and productivity. London: Chartered Management Institute.

Henley Business School

Founded in 1945, by business for business. Henley's full-service portfolio extends from undergraduate and postgraduate degree programmes to a world-renowned executive education offer, from cutting-edge research spanning a broad range of fields to specialist consultancy services. Henley develops leaders to make the right choices: right for themselves, right for their organisations and right for the wider community in which they exist.

Henley Forum for Organisational Learning and Knowledge Strategies

The Henley Forum for Organisational Learning and Knowledge Strategies, founded in 2000, is an internationally recognised centre of excellence. As a membership-based community, it is a magnet for leading business practitioners, world-class academics and thought leaders from the knowledge, learning and OD communities. Our partners collaborate to develop insights, understanding and practical guidance that advances knowledge, learning and change practice in order to develop dynamic organisations.

To discuss the benefits of membership for your organisation, contact Marina Hart +44 (0) 1491 418723.

For more information visit www.henley.ac.uk/henleyforum or email henleyforum@henley.ac.uk for an information pack.

Publishing services provided by Grist. www.gristonline.com