Moderate stress boosts performance. But can companies determine “optimal" stress levels for their employees?

In our time-starved, hyper-connected world, few things remain constant. One of them is stress. From presenting in an important meeting to catching the rush-hour train, or simply worrying about what others think of us, we experience varying levels of stress in everyday life. Studies have shown that too much stress can harm our mental and physical health. Entire industries have sprung up to help people combat stress. Stress, in short, is bad. Or is it?

As with most things, the reality is more nuanced than the hype. After all, our reaction to stress is adaptive. The stress response underpins the fight-or-flight instinct, without which homo sapiens would never have survived. In the modern workplace, too, it stands to reason that a certain amount of stress can lead to better performance.

Research we conducted with Maximilian Burkhardt and Stefan Spinler shows that while high stress harms performance, medium levels of stress can in fact provide a boost.
Notably, compared to previous work on stress, our study takes the novel approach of linking individuals’ stress response to the quality of their work decisions. It also models concrete steps organisations could take to determine optimal stress levels for individual employees, and in turn, improve organisational performance.

**Some stress is better than no stress**

Although *workplace stress* is common, some people are under more strain than others due to the nature of their work. We focused on humanitarian aid workers, who are frequently pressed for time and exposed to emotional trauma. Their work will only become increasingly vital and demanding as climate change leads to more natural and man-made disasters.

We recruited 154 students from the WHU—Otto Beisheim School of Management to participate in our experiment, set up as a role-playing game. Participants assumed the role of the **procurement manager of a humanitarian organisation**, responsible for ordering a perishable relief item that beneficiaries need. The goal of the game is to minimise the overall cost (and potentially win lottery tickets).

We randomly assigned participants to one of five conditions: no stressors, low time pressure, high time pressure, physical stressor (noise) + emotional stressor (emotive pictures), physical stressor + neutral distraction (non-emotive pictures). We also measured participants’ psychological and physiological stress levels. For the former, participants indicated their arousal and emotional state on a scale of 1 to 9. The higher the score, the more aroused and upset or anxious participants felt. Using sensors worn on the wrist, we measured participants’ baseline and in-experiment heart rates to gauge their physical stress levels.

The results show that on average, participants subjected to lower time pressure and emotive pictures displayed medium levels of arousal and physiological stress. They also placed orders closest to the optimal value, outperforming those who were not exposed to any stressor. By contrast, participants exposed to high time pressure experienced high arousal and physiological stress. Expectedly, they also performed the worst, placing orders furthest from the optimal value.
Presumably, a moderate level of stress marshals more cognitive resources to the task at hand and improves performance, not unlike the fight-or-flight response in our ancestors. But when stress overwhelms our ability to cope, our performance suffers.

**Assess, measure, train**

Whereas prior research on stress focused on how it affects individual performance and health, our study focuses on the connection with organisational performance. In the case of our pretend procurement managers, any less-than-optimal performance on their part would have a downstream effect on the effectiveness and viability of their organisation’s humanitarian work.

No doubt people can, and do, use many methods to cope with stress. Just look at the popularity of mindfulness meditation apps, gym classes, spas and stress-busting products. But employers are better placed to tackle – and harness – workplace stress. Based on our findings, we suggest a three-pronged approach: assess, measure and train.

First, assess what causes stress at the organisational level. Is it extreme time pressure, razor-thin margin of error, or an exacting clientele? Interventions should target structural stressors that evoke the highest levels of stress. On the other hand, stressors such as moderate time pressure may have negligible or even positive effects on decision-making.

Next, within the bounds of ethics and privacy, measure stress levels in individual employees. Since individuals respond to stressors differently, what is stressful for one manager may be a walk in the park for the next. As our study demonstrates, organisations could gauge stress responses via a simple questionnaire and a heart rate tracking device.

The first two steps can help organisations uncover what triggers high and moderate stress in individual managers, and how it affects their performance. The third step is to train managers to cope with what stresses them out. In our study, participants made better decisions as the experiment progressed, regardless of which stressful condition they were assigned to. This effect was most obvious for the high-stress group, even though all participants were thoroughly briefed and practised playing the game prior to the experiment.
Safe to deduce then that adequate, realistic training – within ethical limits – may help reduce stress and mitigate its impact more than other prep work. We suggest that companies use hands-on training or immersive and virtual reality simulations, which are relatively inexpensive, to habituate managers to stressful situations. Human beings are incredibly adaptable. As far as stress is concerned, the trick to powering through is to know where to draw the line.

Find article at
https://knowledge.insead.edu/leadership-organisations/making-stress-work-organisations

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About the research

"The effect of acute stress on humanitarian supplies management" is published in *Production and Operations Management*.

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