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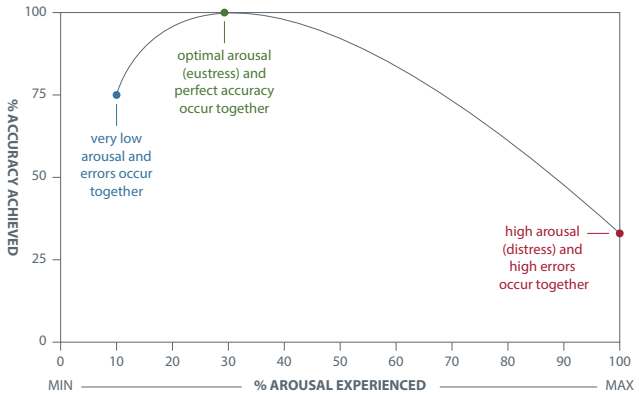
# Research Brief: Good Stress, Bad Stress, and High-Focus Work Performance

Beck Johnson

Stress in the workplace can cause problems. For the individual, high stress can create ill health.[1] For the organization, stress can increase absenteeism, healthcare costs, and turnover.[2] It's understandable that most people want to reduce stress; but, this perspective about stress addresses only one type of stress: distress. Research also indicates that how we think about stress is as important as how much stress we experience, and that the right kind and amount of stress—eustress—helps us reach peak performance.[3] From our study in the Haworth Human Performance Lab looking at the effects of visual distractions on focus work, we see how this plays out in the workplace and offer some ways to manage stress for high-focus work.

## Stress and Performance: Experiment Results

In our experiment, 50 participants completed a time-sensitive, high-focus task while visual distractions were introduced. To perform perfectly, participants needed to pay attention to the task to complete it accurately (without errors) and quickly. If they took too long, the task would register it as an error. Stress was measured by Galvanic Skin Response (GSR) of electrodermal activity—activity that automatically increases as arousal to a demand increases.[4] We found that people with zero mistakes had fairly low stress, people with almost no stress made mistakes, and people with the highest stress had the most mistakes. What's going on here? Let's look at these results it in terms of percentages of stress (x-axis) and accuracy as a measure of performance (y-axis).




## How Stress Impacts Performance

Stress is the body's response to a demand. And, this arousal to respond to any demand is inherently *neutral*— it's not positive or negative. We influence how to interpret these demands.[5] We can see demands as challenges and threats. When we find something challenging, we tend to approach it—it is a positive motivator to engage that demand[6] and one that is necessary for flow.[7] When we find something threatening, however, we tend to reduce exposure to it or avoid it.

To perform a high-focus, time-sensitive task perfectly, there needs to be some level of stress—the necessary amount of nervous system arousal—to pay attention to the task. Zero errors is, in part, the body's response to the *challenge* stressor of performing well on the task. Here is where we see evidence of the right kind and amount of stress having a positive outcome. With too little arousal, not enough attention is being given to the task and people make errors. These people may not have experienced enough of a *challenge* (or a *threat*) to be fully engaged in the task. Lastly, the highest amounts of stress occur for those with the highest amounts of errors. Performing poorly at the start of the task and/or seeing the task as too difficult could make completing it a *high threat* instead of a challenge. Then, starting the task with too much stress only makes matters worse for performance and, as mistakes continue to occur, stress likely continues to increase.

Overall, stress and performance explain 18 percent of any change in each other.

In short, if employees are expected to have high performance under time pressures, they'll be more susceptible to experiencing too much stress—especially if their performance starts to suffer. Working under these kinds of conditions over prolonged periods of time ultimately costs the organization and the employees. Sometimes, however, time pressures are unavoidable.

1 as cited in Crum, Salovey, and Achor, 2013.
2 Hassard et al., 2017.
3 Hargrove, Nelson, and Cooper, 2013.
4 Dawson, Schell, and Filion, 2007.
5 Simmons and Nelson, 2007.
6 Hargrove, Nelson, and Cooper, 2013; Crum, Salovey, and Achor, 2013; Alpert and Haber, 1960.
7 Csikszentmihalyi, 2014.

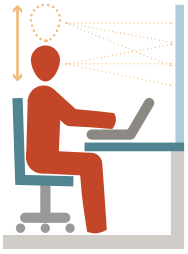
So, what can be done in the workplace to protect employees from burnout associated with the need to be high-performing under time pressures? One response is to protect their ability to perform well. In addition to acoustical distractions, another major contributor of poor performance on time-sensitive, high-focus work is visual distractions.

## Visual Distractions and Performance: Experiment Results

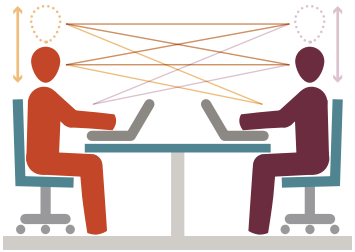
Most of us can agree that distractions make concentrating more difficult. Why is this so? And, how does it impact our work? Focusing on something takes cognitive effort (sometimes measured as eustress), and we have limited resources for that kind of effort.[8] Distractions during focus work are problematic for workplace performance because they divert some of those limited resources[9] toward the distraction that are better used to focus on tasks.[10] Fewer resources can make it more difficult to perform well. So it makes sense to protect our limited resources from distractions that can hijack those resources. As it turns out, our study also found that protecting people from visual distractions can protect their ability to perform well.

We tested how much impact blocking visual distractions can have on performance for participants seated directly across from another worker, as in a benching setting. Three groups were compared against a control group that didn't have any visual distractions. The three groups experienced visual distractions directly in front of them while completing a time-sensitive, high-focus task. One group had no visual barrier; another had a 42-inch (from the floor) visual barrier; and the third had a 50-inch visual barrier. Our results show that when people working in benching with no visual barrier get visually distracted, they make more mistakes than people with no visual distractions at all. Also, people with a 42-inch visual barrier performed the same as the people with none—the 42-inch visual barrier did nothing to protect performance from visual distractions. People with a 50-inch visual barrier, however, made fewer mistakes than these other two groups of people. As expected, the control group had the least mistakes.

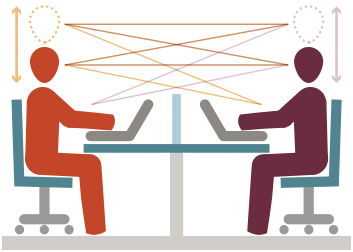
Overall, increasing protection from visual distractions directly in front of workers is responsible for 16 percent of any performance improvement for time-sensitive, high-focus tasks.



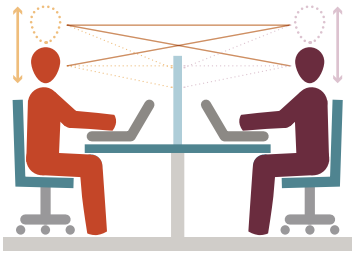
**CONTROL GROUP**
no visual distractions
few mistakes



**NO VISUAL BARRIER**
several visual distractions
many mistakes



**42" VISUAL BARRIER**
several visual distractions
many mistakes



**50" VISUAL BARRIER**
some visual distractions
some mistakes

8 Shipstead, Harrison, and Engle, 2015; Christie and Schrater, 2015; Shipstead et al., 2014.
9 Gailliot et al., 2007; Buschman and Kastner, 2015; Feldman and Barshi, 2007.
10 Fukuda and Vogel, 2011; Colflesh and Conway, 2007; Conway et al., 2005; Kiyonaga, Egner, and Soto, 2012.

## Managing Eustress and Time-Sensitive, High-Focus Work

In general, employees want to perform well and develop mastery. What can employers do to help optimize their employees' performance? For time-sensitive, high-focus work, employers and managers can introduce and help them maintain the right amount of eustress to be engaged and perform at their peak.

1. Help employees frame work demands as challenges instead of threats. Using a "growth mindset" can improve performance. Viewing stress as a way to enhance performance is a mindset that serves as "the mental and motivational context in which coping actions are chosen and employed."[11]

2. Managers should also avoid framing demands as threats. You may get short-term results with these kinds of demands but, over time, it impacts people's health and your organization through absenteeism, and reduced attraction and retention.[12]

3. Protect time-sensitive focus work from visual distractions by providing people with the spaces that minimize visual distractions. This can be done with focus rooms, other work areas with minimal visual distractions directly across from workspaces, benching with at least a 50-inch visual screen,[13] and ability to choose such spaces.[14]

What about any direct effects of acoustical distractions on performance? We understand that acoustical distractions may have an even more profound effect on performance depending upon type of distraction and type of work.[15] And, they are so challenging to manage.[16] Watch for future studies from the Haworth Human Performance Lab that investigate some of these issues.

For more information on designing for focus work and well-being, be sure to download the following white papers from haworth.com.

Designing for Focus Work

Workplace Design for Well-being

## Suggested Reading

Dweck, Carol S. *Mindset*. New York: Random House, 2006.

## Contributor

**Beck Johnson** holds a B.S. in Scientific and Technical Communication and an M.A. in Communication. With 15+ years of experience in social science research methodologies and as a Research Specialist at Haworth she conducts primary and secondary research addressing workplace issues.

11 Crum, Salovey, and Achor, 2013.
12 O'Neill et al., 2015.
13 Johnson, 2017.
14 Nagy et al., 2016.
15 Jahncke, Hongisto, and Virjonen, 2013.
16 GSA Public Buildings Service, 2012.

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