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## RESEARCH BRIEFS

# ATTENTION DEFICIT/HYPERACTIVITY DISORDER AT WORK: DOES IT IMPACT JOB PERFORMANCE?

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### RESEARCH QUESTIONS

Though the common view is that Attention Deficit/Hyperactivity Disorder (ADHD) is a childhood condition, it also affects a substantial proportion of the adult population. Key symptoms of ADHD include difficulties in personal scheduling (e.g., difficulty prioritizing), impaired ability to focus attention on a particular task, problematic time management, procrastination, and inability to consider the consequences of one's actions. These symptoms make ADHD a suspect for poor individual performance in the workplace.

Yet systematic evidence linking ADHD to lower job performance has been lacking so far. Likewise, we know little about the mechanisms that could explain why ADHD renders employees less able to do their jobs well. Filling this gap was the goal of a recent study by Jonathan Halbesleben (University of Alabama), Anthony Wheeler (University of Rhode Island), and Kristen Shanine (University of Alabama).

Halbesleben and his colleagues used the principles of Attentional Control Theory (ACT) in framing their study. ACT proposes that difficulty concentrating on the job is caused by an imbalance between the stimulus-driven system (responsible for reactions to events that demand immediate attention) and the goal-driven system (responsible for keeping individuals moving towards longer-term goals). According to ACT, problems with ADHD ensue when the stimulus-driven system dominates over the goal-driven system. In short, employees with ADHD may tend to respond to events that seem to demand immediate attention but are not job-relevant instead of keeping their focus on job-relevant longer-term goals. As a result, they are constantly distracted from accomplishing those tasks that really matter in their jobs.

Using the principles of ACT, Halbesleben and his colleagues tested the idea that ADHD harms job performance by making employees less efficient in how they utilize their resources. Put simply, ADHD

reduces people's capacity to concentrate their resources in performing job-related activities because their energies are directed toward responding to job-irrelevant events that seem to require immediate attention. This inevitably leads to lower job performance.

A key factor for Halbesleben and his colleagues was work engagement, which reflects the degree of vigor, absorption, and dedication with which employees approach their jobs. High engagement means deep work immersion that translates into superior job performance. Interestingly, Halbesleben and his colleagues proposed that while employees who display symptoms of ADHD can still demonstrate strong work engagement, ADHD prevents them from translating this engagement into actual job performance. In other words, these employees have trouble properly investing their available resources into their work. For example, because they have difficulty focusing, prioritizing, and scheduling, the time, energy, and knowledge they bring to the workplace are not directed to value-added job tasks. Consequently, Halbesleben and his colleagues argued that work engagement is less beneficial for job performance for employees who display symptoms of ADHD.

They also argued that the harm ADHD does depends on the dimension of performance involved. Job performance has two dimensions: (1) In-role performance involves performing tasks that relate to formal requirements of the job (e.g., making a product or delivering a service to a client); and (2) organizational citizenship, which includes discretionary behaviors that are not formally required as part of the job but nevertheless benefit colleagues or the firm. Employees with ADHD may be less able to focus their resources on job-related tasks (in-role performance) and instead focus more attention on urgent demands (organizational citizenship) that are not directly job-related when they come up, such as responding to needs of colleagues (e.g., a request for help). As a result, performance deficits caused

by ADHD may be more severe for in-role performance than for organizational citizenship.

### STUDY DESIGN & METHOD

To test their ideas, Halbesleben and his colleagues conducted three independent studies in the United States. All studies involved collecting data at two different points in time, and in two of these studies job performance was assessed by different raters.

In Study 1, 257 individuals from the general work population who were employed in a variety of industries completed two surveys over a six-month interval. In Study 2, 85 individuals from the general work population completed two surveys separated by one week. In this study, participants' job performance was rated by both participants and also by their co-workers. In Study 3, 243 nurses in a large community hospital were rated on their job performance by both their line managers and by the nurses themselves. The research design had two main advantages: First, using three different samples increased generalizability. Second, measuring factors at different points in time and with different raters made it more likely that findings depicted reality instead of simply participants' interpretations of events.

Well-validated instruments were used to assess all factors, including ADHD, work engagement, and job performance (in-role and organizational citizenship). Based on their responses, survey participants were assigned into three ADHD categories: "high risk," "moderate risk," and "low risk." The proportion of participants falling into the "high risk" category was about 10% across the three studies.

### KEY FINDINGS

All three studies found that ADHD was negatively related to both in-role performance and organizational citizenship. Subsequently, Halbesleben and his colleagues tested their ideas about mechanisms through which ADHD impairs job performance.

As expected, higher levels of ADHD risk diminished the positive impact of work engagement on job performance. For employees at "high risk" for ADHD there was no relationship between their levels of work engagement and their job performance, regardless of who assessed their performance (i.e., themselves, peers, line managers). In contrast, a modest relationship existed for employees at "moderate risk," while employees in the "low risk" group exhibited a strong relationship between work engagement and job performance.

Findings around the hypothesis of whether ADHD would be connected more strongly with deficits in

in-role performance than with deficits in organizational citizenship were intriguing albeit less clear-cut. This hypothesis was supported when job performance was assessed either by colleagues or by line managers. On the other hand, when participants themselves evaluated their own job performance there were no differences in the strength of the relationship between ADHD risk with in-role performance and organizational citizenship. This may suggest that those with ADHD are unaware that they engage in job irrelevant tasks. In turn, this may offer possibilities for future management interventions.

### CONCLUSIONS AND IMPLICATIONS

With their research Halbesleben and his colleagues have contributed in several important ways. First, using three different samples and three different raters of job performance (i.e., employees themselves, peers, and line managers), they provided solid evidence that ADHD is connected with lower job performance. Though this has been suggested in earlier work (Kessler, Lane, Stang, & Van Brunt, 2009), research to comprehensively test and confirm it has been lacking until now. Second, Halbesleben and his colleagues advanced an important mechanism to explain why ADHD impairs job performance. Having an explanatory mechanism is important because this can dictate methods for correcting or ameliorating the problem. Their explanation is that ADHD renders people less efficient in their use of resources because they tend to direct their attention to tasks that seem pressing but are actually of low relevance to what the job requires. A third contribution of the research is that it extends the applicability of Attentional Control Theory into the work environment. ACT theory has been used to explain cognitive processes under general conditions. Its ability to explain outcomes in the work environment makes it useful for analyzing and interpreting situations and events related to job performance.

Halbesleben and his colleagues noted that next steps for scholars should include exploring potential management interventions aimed at mitigating ADHD's negative impact in the workplace. One angle might be to explore ways to improve knowledge and awareness of human resource professionals about ADHD and its consequences for employee output. A subsequent step might involve exploring how organizational policies can be shaped to accommodate the needs of those with ADHD. Such accommodations could, for example, involve time management tools, quiet and distraction-free work areas, and reduction in the number of software applications, especially non-work-related ones, on the computers of office employees. Yet

another intervention worth testing may be the efficacy of training and development approaches to help employees with ADHD become more aware of their inefficient usage of resources and more adept at focusing on task-relevant behaviors.

Though Halbesleben and his colleagues did not discuss it, another important finding in their study is the proportion of participants found to be at “high risk” for ADHD (roughly 10%). This is more than double the officially estimated proportion of adults with ADHD. Scientists speculate that many people have ADHD without being aware of it or without having an official diagnosis. The finding, therefore, implies that the overall performance cost of ADHD may be substantially higher than the recent estimation of nearly \$4,500 per employee with ADHD per year (Kessler et al., 2009).

Finally, Halbesleben and his colleagues do well to warn against automatically categorizing those with ADHD as low performers who must be subjected to “corrective” training or shown the door. Indeed, certain symptoms of ADHD—such as impulsiveness or sensitivity to environmental stimuli—may actually offer performance advantages in

entrepreneurial environments or in professions where fast decision making or creativity is required. Likewise, studies show that adults with ADHD score higher on creativity tests than non-ADHD adults (White & Shah, 2011). For that reason, researchers should also explore whether there are particular conditions or job characteristics that make ADHD advantageous for job performance.

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