

## PERSPECTIVE

# Mental health and poorer cognitive functions

BY AMITAI ABRAMOVITCH

All types of mental disorders come with a hidden cost in the form of cognitive dysfunction, including deficits in memory, attention, executive functions and processing speed, according to a study that my colleagues and I published in June in the journal *Clinical Psychology Review*.

We found that both diagnosable mental disorders, as well as some common symptoms such as anxiety and worry, carry a “cognitive price.” We termed this phenomenon “The C Factor” — short for cognitive dysfunction. This can be defined either as lower performance on cognitive tests or reduction in cognitive abilities, such as attention and memory. Our analysis suggests that it can be found across disorders and that it constitutes an integral part of poorer mental health.

Our team analyzed data from all existing meta-analyses and systematic reviews of cognitive function across all disorders recognized by the Diagnostic and Statistical Manual of Mental Disorders. We included 97 meta-analyses covering 29 disorders. Overall, our study incorporated data from more than 200,000 individuals.

### Why it matters

Mental disorders have become increasingly prevalent in the United States and around the world, particularly in young adults and adolescents. Even before the pandemic, 1 in 5 Americans suffered from a mental disorder.

The most comprehensive study to date examining the worldwide prevalence of mental disorders

projected that 55 percent of Americans will meet criteria for at least one mental disorder over the course of their lifetime. Notably, that study — which was conducted 15 years ago — examined diagnosable disorders. But the prevalence of lifetime experience of clinically meaningful symptoms in the general population is much higher. For example, one study found that although only about 20 percent of Americans will meet formal criteria for major depressive disorder in their lifetime, 62 percent of Americans will experience meaningful symptoms of depression.

Since our findings demonstrate poorer mental health is associated with at least some degree of cognitive dysfunction, this type of deficiency may be far more common than thought.

These findings are important because some mental disorders may be misdiagnosed based on cognitive dysfunction. For instance, a college student who struggles with obsessive-compulsive disorder should be expected to have some difficulties in areas such as concentration, organization, time management and memory. In such a case, however, these cognitive challenges do not stem from conditions such as dyslexia or attention-deficit/hyperactivity disorder, but rather from OCD. This potential confusion may lead to a misdiagnosis.

Indeed, ADHD, a disorder characterized by deficits in executive functions, is one of the most misdiagnosed disorders across all age groups. According to one 2010 study, about 20 percent of youths diagnosed with ADHD and receiv-

ing medications are misdiagnosed. In addition, evidence shows that doctors all too readily prescribe stimulant medications for symptoms of inattention, even without a complete or formal diagnosis of ADHD.

Therefore, lack of knowledge about cognitive dysfunctions associated with OCD could lead to inappropriate treatment. Indeed, stimulant medication may increase irritability and anxiety and exacerbate cognitive dysfunction in such individuals.

### What still isn't known

Two major questions arise from the results of our study.

First, why does any significant mental health issue come with a cost in the form of cognitive dysfunction? That seems surprising given that various mental health disorders differ significantly in terms of symptoms and type of interventions. Our team is working to unravel the factors that can harm cognitive functioning, including reduced motivation, low effort and lower self-efficacy.

Second, what is the actual mechanism underlying this phenomenon? For example, if we find that general suffering is common to all mental disorders, what is the specific mechanism by which suffering hinders performance on cognitive tests? More research is needed to examine these questions.

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