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ADHD: Medication alone doesn't improve classroom learning for children

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FOR decades, many physicians, parents and teachers have believed that stimulant medications help children with ADHD learn because they are able to focus and behave better when medicated.

After all, an estimated 6.1 million children in the US are diagnosed with attention-deficit/hyperactivity disorder, and more than 90 percent are prescribed stimulant medication as the main form of treatment in school settings. However, in a peer-reviewed study that several colleagues and I published in the *Journal of Consulting and Clinical Psychology*, we found medication has no detectable effect on how much children with ADHD learn in the classroom. At least that's the case when learning—defined as the acquisition of performable skills or knowledge through instruction—is measured in terms of tests meant to assess improvements in a student's current academic knowledge or skills over time.

Compared to their peers, children with ADHD exhibit more off-task, disruptive classroom behavior, earn lower grades and score lower on tests. They are more likely to receive special education services and be retained for a grade, and less likely to finish high school and enter college—two educational milestones that are associated with significant increases in earnings.

Measurements of learning

IN this study, funded by the National Institute of Mental Health, we evaluated 173 children between the ages of seven and 12. They were all participants in our Summer Treatment Program, a comprehensive eight-week summer camp for children with ADHD and related behavioral, emotional and learning challenges.

Children got grade-level instruction in vocabulary, science and social studies. The classes were led by certified teachers. The children received medication the first half of summer and a placebo during the other half. They were tested at the start of each academic instruction block, which lasted approximately three weeks. They then took the same test at the end to determine how much they learned.

Contrary to the conventional wisdom under which parents and teachers have long operated, we found children learned the same amount of science, social studies and vocabulary content whether they were taking medication or a placebo.

Yes. We were shocked by this finding, too.

In our study, medication helped children complete more schoolwork and improve their classroom behavior, as expected. When taking medication, children completed 37 percent more arithmetic problems per minute and exhibited 53 percent fewer classroom rule violations per hour.

Unfortunately, completing more schoolwork and behaving better in the classroom did not lead to higher grades on tests, which heavily determine overall class grades. These results support the findings of other research that has found there is no long-term beneficial effect of medication on standardized test scores.

This is an important finding because stimulant medication is by far the most common treatment for children with ADHD, and the majority receive only medication. Other treatments available for children with ADHD include behavior therapy, including training for parents and a combination of therapy and medication.

HOW to HELP children With adhd thrive

THERE are ways for children to improve academic achievement with effective classroom strategies alone, rather than just being on medication to begin with. Behavioral and academic strategies that significantly help youth with ADHD include parent training and classroom-based management tools like a daily report card. A child with ADHD can also receive effective behavioral services in school that are specific to academic achievement, such as 504 and individualized education plans, also known as IEPs, for students in special education.

Our previous research has found that behavioral therapy—when used first—is less expensive and more effective than medication in treating children with ADHD. Stimulants are most effective as a supplemental, second-line treatment option for those who need it and at lower doses than typically prescribed. In other words, medication should only be added if children still need additional support after the behavioral and academic interventions have been tried.

Additionally, in 2020, the Society for Developmental and Behavioral Pediatrics published new clinical guidelines that strongly recommend behavioral intervention as the first-line treatment for youth with ADHD and medication as a second-line treatment, if necessary.