EPIDEMIOLOGY

Duke Study Faults Overuse Of Stimulants for Children

Ritalin is an effective therapy for children diagnosed as hyperactive, but new research shows it's being given to many who don't fit the diagnosis

Along with computers and graphing calculators, the drug Ritalin (methylphenidate) became ubiquitous in U.S. classrooms in the 1990s. A stimulant of the central nervous system, Ritalin is widely used—doctors write 11 million prescriptions annually—to calm a type of fidgety behavior called "attention-deficit hyperactivity disorder" (ADHD). And as sales climb, some experts are growing concerned that Ritalin is overused. Most psychiatrists think, however, that stimulants are being *under*prescribed, because too many cases of ADHD are going untreated. Now, an authoritative study published in this month's *Journal of the American Academy of Child and Adolescent Psychiatry* is stimulating a debate on these issues.

Several studies have shown that Ritalin use is increasing in U.S. grade schools. But a research team led by child psychiatrist Adrian Angold and epidemiologist Jane Costello at Duke University in Durham, North Carolina, went a step further: They looked to see whether ADHD was being accurately diagnosed and treated. They found a stunning mismatch between symptoms and drug treatment.

They discovered that one-quarter of the children with confirmed ADHD were not getting drug therapy. But, remarkably, they also found that more than half of the children in the community who were receiving stimulants did not come close to meeting the diagnostic criteria for ADHD. The bottom line, says Angold, is straightforward: "There's a very real problem in this area. ... A lot of children are receiving poor and inappropriate stimulant treatment." In an accompanying commentary, Benedetto Vitiello, a leader in child and adolescent studies at the National Institute of Mental Health in Bethesda, Maryland, calls these findings "surprising" and "provocative."

Angold, Costello, and their colleagues came to their conclusions by looking at a group of schools in 11 counties in the Smoky Mountains of North Carolina between 1992 and 1996. They began with 17,000 children aged 9, 11, or 13 in the initial study year, then randomly sampled a subset of 4500 names. Using parent interviews to identify children at high or low risk for ADHD, they winnowed the sample down to 1422 children for intense study. They collected additional data and interviewed the children to determine directly whether they had ever been given stimulants or shown signs of ADHD.

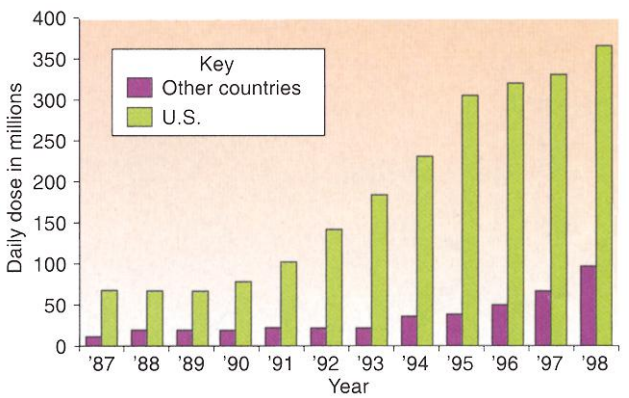
Overall, the Duke researchers found that 3.4% of the children in the sample had ADHD as defined by rigorous diagnostic criteria, called the DSM-III-R. This rate is within the accepted U.S. prevalence range of 3% to 5%. Also, as expected, they confirmed that the rate of ADHD was higher among boys (5.3%) than among girls (1.5%). About 6.2% of the interviewed children had some ADHD-like behavior, suggesting that under less rigorous standards, this proportion might be eligible for treatment with stimulants. But the fraction who actually received stimulants was even larger—7.3%.

This fraction is in line with other findings of pervasive use of stimulants. For example, Gretchen LeFever and colleagues at the Eastern Virginia Medical School in Norfolk reported last September on in-school ADHD treatment of elementary school children in 1995–96 in two Virginia cities. LeFever found that 8% to 10% of children in grades two through five were receiving ADHD medication at school. She notes that this is a low estimate, because it didn't count Ritalin prescriptions given only at home.

That leaves a big mystery: Why did the children in the Duke study who had no symptoms of ADHD get medication? The report doesn't say. But Vitiello and others suggest that parents and teachers may be lobbying doctors to write stimulant prescriptions in the hope that they will help children do better in school.

Proponents of Ritalin therapy argue that the Duke study supports earlier research showing the opposite problem: that many parents and pediatricians are biased against the use of stimulants, even though they are an effective therapy for ADHD. Peter Jensen, director of the Center for the Advancement of Children's Health of the New York State Psychiatric Institute and Columbia University in New York City, has published the only study other than Angold's that looked at whether stimulants were being given to the ADHD children who would benefit from them. His sample was smaller, and the data were from 1992, but he found that only 12% of ADHD-diagnosed children were getting appropriate stimulant therapy. "While we do have to be worried about pockets of overprescribing," Jensen says, "there is good reason to think that only about one-half the children with ADHD are getting treated."

Jensen thinks that the Duke team may have underestimated the number of children who have ADHD and thus overestimated the number who are getting Ritalin inappropriately. In a comment published alongside Angold's paper, he says it's "quite remarkable" that some of the children in Angold's study with teacher ratings for ADHD-like problems did not qualify as confirmed ADHD children when examined by the Duke team. These "startling findings," he says, suggest that "critical information may have been missing from the authors' diagnostic procedures. The teachers may have been right. ..."



A rising tide. Although Ritalin (methylphenidate) consumption has gone up in both the United States and elsewhere, daily consumption of the drug is still far higher in this country.

Jensen's great concern, he writes, is that "the message from Angold and colleagues' article not become a mantra for those who would deny children the right and access to effective treatments. ..." But Angold says it's critical that evaluations not be swayed too much by teachers' views.

Despite their differences over the Duke study's findings, Jensen and Angold agree on several points. Stimulants do help children with ADHD and appear to have only minor side effects. Second, they agree that current practice in treating ADHD is poor. And third, as Angold says: This "chronic, highly disabling condition ... deserves to receive much more in the way of assessment and treatment resources than it does." —ELIOT MARSHALL

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