MACLEAN'S

Categories: Editor's Picks, Health, Science

Is ADHD a mental health crisis, or a cultural one?

The reasons behind the rapid rise in diagnosis rates

by Kate Lunau on Monday, February 24, 2014 11:04am - 241 Comments

Photo illustration by Daniel Ehrenworth

Any visitor to North Carolina and California will know that the two states have their differences. The former is a typically "red state"; California is staunchly "blue." Each has certain geographic, ethnic and cultural peculiarities, different demographic makeup, family income levels, and more. Yet perhaps the most surprising divide, one many wouldn't expect, is that North Carolina appears to be a hotbed for attention deficit hyperactivity disorder, or ADHD—especially when compared to California. A child who lived in North Carolina instead of California in 2007, according to U.S. academics Stephen Hinshaw and Richard Scheffler, was 2½ times more likely to be diagnosed.

In their forthcoming book *The ADHD Explosion*, Hinshaw and Scheffler—a psychologist and health economist, respectively, at the University of California at Berkeley—examine the causes behind the startling and rapid rise in diagnosis rates of ADHD, a neurobehavioural disorder that has somehow become epidemic. In the U.S., more than one in 10 kids has been diagnosed; more than 3.5 million are taking drugs to curb symptoms, from lack of focus to hyperactivity. While ADHD typically hits middle-class boys the hardest, rates among other groups are steadily rising, including girls, adults and minorities. Kids are being tested and diagnosed as young as preschool. In North Carolina, as many as 30 per cent of teenage boys are diagnosed. Scheffler says, "It's getting scary."

According to psychologist Enrico Gnaulati, who is based in Pasadena, Calif., ADHD is now "as prevalent as the common

cold." Various factors seem to be driving up the numbers, factors that extend from home to school to the doctor's office and beyond. "So many kids have trouble these days," says long-time ADHD researcher L. Alan Sroufe, professor emeritus at the University of Wisconsin at Madison. "I doubt it's a change in our genetic pool. Something else is going on."

A closer look at the case of North Carolina and California may be instructive. According to Hinshaw and Scheffler, North Carolinian kids between the ages of four and 17 had an ADHD diagnosis rate of 16 per cent in 2007. In California, it was just over six per cent. Kids with a diagnosis in North Carolina also faced a 50 per cent higher probability they'd get medication. After exhaustively exploring demographics, health care policies, cultural values and other possible factors, they landed on school policy as what Scheffler calls "the closest thing to a silver bullet."

Over the past few decades, incentives have been introduced for U.S. schools to turn out better graduation rates and test scores—and they've been pushed to compete for funding. North Carolina was one of the first states with school accountability laws, disciplining schools for missing targets, and rewarding them for exceeding them. "Such laws provide a real incentive to have children diagnosed and treated," Hinshaw and Scheffler write: kids in special education classes ideally get the help they need to improve their test scores, and (in some areas) aren't counted in the district's test score average.

The rate of ADHD diagnosis varies between countries; as Hinshaw and Scheffler have shown, it even varies significantly within countries. This raises an important question: Is the ADHD epidemic really a mental health crisis, or a cultural and societal one?

ADHD is a "chronic and debilitating mental disorder," Gnaulati says, one that can last a lifetime. It's believed to affect between five and 10 per cent of the population, and boys still seem especially prone. (Nearly one in five high school boys have ADHD, compared to one in 11 girls, according to the U.S. Centers for Disease Control and Prevention.) Kids with ADHD can have a hard time making and keeping friends. In one study of boys at summer camp, Hinshaw found that after just a few hours, those with an ADHD diagnosis were far more likely to be rejected than those without one. The disorder can persist into adulthood, raising the risk of low self-esteem, divorce, unemployment and driving accidents; even getting arrested and going to jail, according to a report from the Centre for ADHD Awareness Canada.

In fact, the brains of people with ADHD are different. They're short on receptors for the neurotransmitter dopamine, and their brain volume looks to be slightly smaller. But no medical test or brain scan can yet give a definitive diagnosis. The gold standard comes from the *Diagnostic and Statistical Manual of Mental Disorders*, or *DSM*, from the American Psychiatric Association. The latest version of this "bible of psychiatry," released in May, lists nine symptoms of inattention (making careless mistakes on homework; distractibility; trouble staying organized), and nine of hyperactivity or impulsivity (interrupting others; climbing when it's inappropriate; and excessive talking, to give some examples). They'll sound familiar to anyone who's spent time with kids. "Every child is to some extent impulsive, distractible, disorganized, and has trouble following directions," says Gnaulati, author of Back To Normal, an investigation of why what he calls "ordinary childhood behaviour" is often mistaken for ADHD.

The *DSM* specifies that a child should be showing many symptoms consistently, in two or more settings (at home and at school, for example), a better indication that he isn't just acting out because of a bad teacher, or an annoying sibling. "Studies show that if you stick to the two-informant requirement, the number of cases falls by 40 per cent," says Gnaulati. Surprisingly often, the diagnoses seem to be hastily given, and drugs dispensed.

It was once thought that stimulants affected people with ADHD differently—calming them down, revving up everyone else—but we now know that's not the case. Virtually everybody seems to react the same in the short term, Sroufe says. "They're attention-enhancers. We've known that since the Second World War," when they were given to radar operators to stay awake and focused. Those with true ADHD show bigger gains, partly because their brains may be "underaroused" to begin with, write Hinshaw and Scheffler. (About two-thirds of U.S. kids with a diagnosis get medication; in Canada, it's about 50 per cent.) Stimulants have side effects, including suppressing appetite, speeding up the heart rate and raising blood pressure. Kids who take them for a long time might end up an inch or so shorter, according to Hinshaw and Scheffler's book, because dopamine activity interferes with growth hormone. And those who don't need them will eventually develop a tolerance, needing a greater and greater quantity to get the effect they're after.

"Brain doping" is by now a well-known phenomenon among college and university students across North America. Many students don't see stimulant use as cheating: One 2012 study found that male college students believe it's far more unethical for an athlete to use steroids than for a student to abuse prescription stimulants to ace a test. "Some red-hot parents want to get their kid into Harvard, Berkeley or Princeton," Scheffler says. "They're going to need a perfect score, so they're going to push." With an ADHD diagnosis, students can seek special accommodations at school, like more time on tests including the SAT, a standardized college entrance exam. With parents, students, and even school boards recognizing the potential benefits that come with diagnosis, ADHD is occurring with increasing frequency among groups other than

the white middle class, where rates have typically been highest: according to Hinshaw and Scheffler, African-American youth are now just as likely, if not more, to be diagnosed and medicated.

Drug advertisements could also be driving rates of diagnosis upward. Hinshaw and Scheffler describe one ad from Johnson & Johnson, maker of the stimulant Concerta, which shows a happy mother and a son who's getting "better test scores at school" and doing "more chores at home," the text reads. "The message is clear: the right pill breeds family harmony," they write. Sometimes, another underlying health problem will be mistakenly diagnosed as ADHD. In his new book, ADHD Does Not Exist, Richard Saul documents 25 conditions that can look like ADHD; most common are vision and hearing issues. "Until you get glasses, it's very hard to understand what [the teacher] is speaking about if you can't see the board," he says. "Same with hearing." Conditions ranging from bipolar disorder to Tourette's syndrome can also be mistaken for ADHD, Saul writes. Despite the strongly worded title of his book, he believes that 20 per cent of those diagnosed are "neurochemical distractible impulsive," and have what we'd term ADHD. The rest are being misdiagnosed, and as a result, he says, "the right treatment is being delayed."

Sleep deprivation is another big cause of misdiagnosis. "It's paradoxical, but especially for kids, it does create hyperactivity and impulsivity," says Vatsal Thakkar of New York University's Langone Medical Center. Given mounting academic pressures, and the screens that populate virtually every room, many kids simply aren't getting enough downtime. A child's relative immaturity can factor in, too. In 2012, a study in the Canadian Medical Association Journal found that the youngest kids in a classroom were more likely to have an ADHD diagnosis, and to be prescribed medication. Those born in December are nearly a full year younger than some of their peers, a big difference, especially in kindergarten. (In the U.S., half of all kids with ADHD are diagnosed before age six.)

Gnaulati, who has a son, worries the deck's been stacked against boys, who are more prone to blurt out an answer, run around the classroom, or otherwise act out. "During the kindergarten years, boys are at least a year behind girls in basic self-regulation," he says. Gnaulati notes that school teachers, pediatricians and school psychologists are all more likely be female—which he argues could be a contributing factor. "In a sense," he writes, "girl behaviour has become the standard by which we judge all kids."

In Canada, we don't track ADHD diagnosis rates as closely as in the U.S. But the rate of diagnosis does look to be picking up here, and elsewhere, too. A study by Hinshaw and Scheffler compared the use of ADHD drugs to countries' per capita gross domestic product. "Richer countries spend more [on ADHD medications]," Scheffler says. "But some countries still spend more than their income would predict." They found that Canada, the U.S. and Australia all had a greater use of these drugs than GDP suggests. A 2013 paper in the British Journal of Medicine notes that Australia saw a 73 per cent increase in prescribing rates for ADHD medications between 2000 and 2011. The Netherlands had a similar spike—the prevalence of ADHD, and the rate at which ADHD drugs were prescribed to kids, doubled between 2003 and 2007.

Peter Conrad of Brandeis University, outside Boston, is studying how the *DSM* definition of ADHD (which we use in Canada) has been exported around the globe, leading to more kids diagnosed and treated. "Until the late '90s, most diagnosis in Europe was done under the World Health Organization's International Classification of Diseases," which is much more strict, he notes. (The ICD, for example, required symptoms of inattention, impulsivity and hyperactivity, while an older version of the *DSM* required only two.)

European countries began to adopt the DSM definition, a response to the fact that so much research on ADHD comes out of the U.S.—and the *DSM* began to be seen as the standard. "France and Italy still have low rates," says Conrad, "partly because they don't use the *DSM*." A 2013 study from the University of Exeter found that U.K. kids were much less likely than those in the U.S. to be diagnosed with ADHD, which may be due to tougher criteria, or to parents' resistance to medicating their kids. Even so, other countries are catching up. According to Hinshaw and Scheffler, the use of ADHD medication is rising over five times faster around the world than in the U.S.

Many of the same pressures that motivate diagnosis in the U.S. are at play in Canada, although in different ways. Given the tight job market and increasing academic demands, students are under more pressure to succeed than ever. And while our school test results aren't tied to funding like in the U.S., "high-stakes testing" is increasingly important, says Elizabeth Dhuey, a University of Toronto economist who studies education.

For one thing, it's a point of pride for schools. Results from Ontario's EQAO standardized test are reported in the media, and used to rank and compare institutions. ("EQAO: How did your school fare in Ontario's standardized tests?" reads one 2012 Toronto Star headline.) What constitutes an "exceptionality" and triggers special services also varies between provinces. In Newfoundland, ADHD has been an "exceptionality" for the past two decades; in Ontario, it isn't considered a special category, but ADHD students can access special education and other extra help on a case-by-case basis. And in B.C., school districts can get supplemental funding for students with ADHD, according to the ministry of education.

These pressures aren't abating—if anything, many are getting stronger—and so, it seems likely we haven't yet reached peak

ADHD. Scheffler and Hinshaw raise the possibility that, within the decade, ADHD rates in the U.S. might reach 15 per cent or higher; and that as many as four-fifths of those diagnosed could have a prescription.

The hope lies in finding better scientific markers—a definitive test that could confirm true cases of ADHD, and those who will benefit most from treatment, including medication. Otherwise, we're facing the prospect of a generation of kids living with a serious mental health diagnosis, and quite possibly taking powerful drugs long-term into adulthood, with all the potential side effects they entail. Whatever is contributing to ADHD's startling rise, it's clear that this isn't a contagious disease kids are swapping on the playground. In many cases, we're giving it to them.

Tags: ADHD

More by Kate Lunau

- **The future of electronics? Stretchy, wearable ... flushable**

  The latest dispatch from Kate Lunau at the AAAS conference

- **The robots are coming**

  Kate Lunau checks out the two robotic technologies that could be coming soon–one cool, one cute

- **The sea lion that can keep a beat**

  New research could shed light on music's role in human society

241 Comments Macleans.ca Login

Sort by Oldest Share Favorite

Join the discussion…

EmilyOne • 7 days ago

More cultural nonsense. This isn't happening in China or Germany or anywhere else.

5 • Reply • Share ›

guest ➔ EmilyOne • 7 days ago

http://www.china.org.cn/englis...

The rates in Germany are consistent with those in the rest of Europe.

3 • Reply • Share ›

EmilyOne ➔ guest • 7 days ago

LOL a western media report.

'naive, inappropriate behaviors' Really? Snort.

5 • Reply • Share ›

guest ➔ EmilyOne • 7 days ago

http://sharpbrains.com/blog/20...

Hate to point out the obvious but you are blogging on a 'western media" site and most of the info on Wiki is provided by western media and the like. Perhaps some primary research would interest you.

10 • Reply • Share ›

guest ➔ guest • 7 days ago

What is accurate is that different countries are using different approaches to deal with the diagnosis.

3 • Reply • Share ›

EmilyOne ➔ guest • 7 days ago

Yes, it's all 'western' and cultural.....we don't need to be drugging our kids.

A few years ago it was autism.....an epidemic we were told....damage from vaccines we were told.....and look at the damage THAT did.

Turned out doctors were overdiagnosing it....and vaccines had nothing to do with it.

We don't even know what 'normal' is for kids across the world, much less what 'problems' there are....we lose 20,000 kids a day to starvation and yet

Previous In Ukraine protesters pressure politicians, focus shifts to pro-Russia regions

Next The cases for and against vouching

From Macleans

- **Arts**

Jean-Marc Vallée takes back road to the big time

A Quebec auteur's U.S. film cements his career

- **Blog Central**

75 Uniquely Canadian Moments: Oscar night for Canada

In 20014, Denys Arcand took home the Oscar for Best Foreign Language Film

- **Capital Read**

On the science of Gravity

Paul Wells on what the movie says about humanity's place in space

- **Arts**

Six Ways to Sunday: On Chris Brown and the nature of folly

The six buzziest talking points from the weekend and beyond

- **Capital Read**

Essential listening: Maclean’s on the Hill

Frank talk about the stories behind this week’s headlines

- **Canada**

Hot buttons at the Manning conference

Maclean’s video: Conservatives snap up Rob Ford buttons at Ottawa confab