

NEWS

Sweeping study underscores autism's overlap with obsessions

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The largest study of people with autism and obsessive-compulsive disorder (OCD) to date adds to mounting evidence that the two conditions share genetic roots¹.

Compared with their typical peers, people with autism are twice as likely to receive a diagnosis of OCD and people with OCD are four times as likely to also have autism, according to a Danish study of more than 850,000 people. The findings were published 11 November in *PLOS ONE*.

The disorders don't just intersect in individuals: When OCD runs in a family, autism does too.

"We also see that at the familial level, when you have at least one parent with OCD, their offspring have a higher risk of autism," says lead investigator **Sandra Meier**, assistant professor of business economics in the NCCR-National Centre for Register-based Research at Aarhus University in Denmark.

The disproportionate number of autism diagnoses among the children of people with OCD supports the idea that the two conditions share a genetic predisposition, says **Evdokia Anagnostou**, associate professor of pediatrics at the University of Toronto. These results suggest that clinicians should look carefully for signs of autism in individuals who have OCD and vice versa — information that could inform treatment choices.

Symptom similarities:

To make their discovery, Meier and her colleagues mined the **Danish Psychiatric Central Research Register**, a database of records from every Danish resident who received psychiatric care through the nation's public healthcare system dating back to 1969. The registry contains medical details of roughly 855,000 people and their 3.9 million outpatient and inpatient visits.

"There's almost 100 percent coverage" of the Danish population, says **Per Hove Thomsen**, clinical professor of psychiatry at the Psychiatric Hospital for Children and Adolescents at Aarhus University. Thomsen published related findings on children with OCD earlier this year but was not involved with Meier's study².

The researchers identified 18,184 people with autism, 11,209 with OCD and 739 with both. Of the individuals with both conditions, 253 were diagnosed with autism first, 281 were diagnosed with OCD first and 205 received both diagnoses at the same time.

The fact that nearly one-third of children who have both conditions received the OCD diagnosis first is surprising because OCD symptoms typically emerge after puberty. Autism, by contrast, usually surfaces before age 5.

This reverse diagnostic sequence suggests that children with OCD typically have subtle autism symptoms that are recognized only later in life, perhaps after traditional OCD treatments fail. Earlier this year, Thomsen's group reported that up to 17 percent of Danish children with OCD display mild symptoms of autism.

Children with OCD are less likely to have severe autism with cognitive impairment — not because this combination is incompatible, but because of how OCD is diagnosed. “We cannot make the diagnosis in people who cannot tell us what they’re thinking,” Anagnostou says. Clinicians typically make an OCD diagnosis after people recognize and articulate thoughts as being obsessive.

Behavior therapies:

The overlap between the two disorders suggests their common symptoms have genetic underpinnings. Children with both conditions rely on **repetitive behaviors** to calm their anxiety, for example. Increasing evidence suggests the two conditions stem from the same genetic variants, including one for JMJD2C, an enzyme involved in stripping chemical tags off DNA³.

However, in many ways, autism and OCD are distinct conditions. People who have autism struggle with social communication, whereas those with OCD have no such difficulties: They tend to engage in compulsive behaviors to ward off obsessive thoughts, rather than to relieve social angst.

Still, if the two disorders share a common biology, treatments for one might be useful for the other. A meta-analysis published in June found that modified forms of cognitive behavioral therapy — an effective treatment for OCD — alleviate anxiety and repetitive behaviors in people with autism⁴.

Some researchers **discourage interventions** intended to curtail repetitive behaviors in people with autism, because those behaviors may relieve the individuals’ anxiety or offer other benefits. But rituals such as hand washing are not necessarily calming, and when they start to hinder a child’s development and social functioning, strategies to ease them may be warranted, Meier says.

“If you treat these behaviors, the child could probably spend less time with the ritual,” Meier says. “This might increase their social ability so they could spend more time trying to talk to people.”

REFERENCES:

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