

## Distinct treatment needed: Tourette's and obsessive-compulsive disorder

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While 30 to 50 percent of people with Gilles de la Tourette Syndrome are also affected with obsessive compulsive disorder (OCD), both illnesses might have a distinct neurocognitive profile, according to a new study published in the journal *Neuro-Psychopharmacology & Brain Psychiatry* by researchers from the Université de Montréal and the Fernand-Seguin Research Centre of the Louis-H Lafontaine Hospital.

“In the study of cerebral activity or the relationship with working memory and attention, this was the first study to show a clear dissociation between OCD and Tourette’s dimensions. This could have a major impact in the treatment. It is difficult to treat Tourette’s symptoms if you don’t identify and address symptoms of OCD first,” said Université de Montréal associate researcher Dr. Marc Lavoie, who completed the study with students Geneviève Thibault and Mihaela Felezeu, and clinician collaborators Kieron O’Connor, Christo Todorov and Emmanuel Stip.

Gilles de la Tourette Syndrome is a complex neuropsychiatric disorder, marked by increasing motor and phonic tics, which begins in childhood and peaked at 11 years old. The illness affects 0,05 to 3 percent of children and about 1 percent of adults. OCD, an anxiety disorder characterized by obsessions and compulsions, affects 2.5 percent of the population.

“When testing patients, we found that brain regions associated with working memory among people affected by Tourette’s are much more

active than control subjects when stimulated, while regions associated with working memory in OCD patients decreased,” explained Dr. Lavoie.

The research team invited four groups to take part in their study:

- A first group of 14 adults affected by Tourette’s but not OCD.
- A second group of 12 adults affected by both Tourette’s and OCD.
- A third group of 15 participants with OCD alone.
- A fourth group of 14 people without neurological or psychiatric problems.

Subjects were asked to perform a series of experimental tasks to stimulate specific brain regions. In one test, subjects viewed shapes and singled out which images differed. A electroencephalogram monitored brain activity throughout each test. “This study will help clinicians provide better diagnostic and treatment by isolating therapies that will better help OCD or Tourette’s patients,” said Dr. Lavoie.

Source: University of Montreal

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