

## **Moderating Role of Depression on the Association of Tic Severity with Functional Impairment in Children**

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### **Background:**

Chronic tic disorders (CTD) commonly co-occur with other psychiatric disorders. CTD have been linked to functional impairment and reduction in quality of life. Insufficient research is available on depressive symptoms in patients with CTD, especially children and adolescents, yielding conflicting findings.

### **Methods:**

The sample consisted of 85 children and adolescents (6-18 years) with a CTD who were treated in a large referral center. Participants were evaluated using gold standard self- and clinician-reporting instruments to measure tic symptom severity and tic-related functional impairment (Yale Global Tic Severity Scale: YGTSS); depression (Child Depression Inventory: CDI); and obsessive-compulsive symptoms (Children Yale Brown Obsessive Compulsive Scale: CY-BOCS).

### **Results:**

Depressive symptoms (mild to severe) were exhibited by 21% of our sample. Study participants with CTD and comorbid obsessive-compulsive disorder (OCD) and/or Attention Deficit Hyperactivity Disorder (ADHD) had higher rates of depressive symptoms compared to those without comorbidities. Significant correlations were found within and among all tic related and OCD related measures, yet depressive symptoms only correlated to tic-related functional impairment. Depression significantly and positively moderated the correlation between tic severity and tic related functional impairment.

### **Conclusions:**

Findings suggest that depression plays an important part as a moderator in the link between tic severity and functional impairment in children and adolescents. Our study highlights the importance of screening for and treating depression in patients with CTD.