

TOURETTES – EVERYBODY TICS DIFFERENTLY

Does Tourettes Cause Learning Difficulties?



Studies show that in groups of children and adolescents with a tic disorder in 30-40% of cases, there will also be a learning difficulty (meaning difficulties with learning rather than an intellectual disability).

There have, however, been multiple studies done in this area to arrive at this statistic and many variables were a factor in the range of studies conducted. These included but were not limited to, the age of the participants, their gender, their biological age at the onset of the tic disorder, the seriousness of the tic disorder, the comorbidity of ADHD or ASD, family genetics, birth events, trauma, cognitive development and many more.

This high comorbidity between the presence of learning difficulties and TS should always be considered when working with children who have tic disorders. This is because learning and cognitive performance can be affected by tic disorders in several ways these include...

- A. Deficits that are integral to tic disorders.
- B. Deficits arising from efforts at tic suppression.
- C. Deficits resulting from compensatory mechanisms (neural and otherwise).
- D. Factors that affect neuropsychological test performance such as fluctuations in cognitive performance due to the waxing and waning course of a tic disorder
- E. Effects of medication, such as sedation and cognitive slowing.
- F. The impact of comorbidities.

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All the above factors may independently and collectively contribute to neuropsychological and executive function (planning and regulation) impairments noted in tic disorders and may explain the variation in performance across the many studies completed on this topic.

Something for parents and educators to be aware of is that studies in individuals with tic disorders have reported increased intrusions (urges to tic) during recall on a word list suggesting a reduction in focus and attention during intensive learning tasks. Therefore, the individual with a tic disorder may have difficulty in controlling the constant interference from the irrelevant pre-tic stimuli.



This is in keeping with the observation that people with tic disorders constantly experience somatosensory sensations, such as pressure pain or warmth in the form of sensory sensations making it extremely difficult to suppress irrelevant information in sensory, motor, and cognitive domains which result in ticcing. These constant sensory experiences are described as a 'relentless drumbeat' by one researcher.

Adapted by Get into Neurodiversity for a global audience.

Valsamma Eapen, Rudi Črnčec, Sarah McPherson and Corina Snedden (2013). Tic Disorders and Learning Disability: Clinical Characteristics, Cognitive Performance and Comorbidity. Australasian Journal of Special Education, 37, pp 162-172 doi:10.1017/jse.2013.2

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