STIMULANTS IMPROVE THEORY OF MIND IN CHILDREN WITH ATTENTION DEFICIT/HYPERACTIVE DISORDER

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Impairments in 'theory of mind' (ToM) were linked to social cognition and reciprocal relationships deficits in children with attention deficit/hyperactivity disorder (ADHD). Twenty-four children with ADHD (13 with inattentive type and 11 with combined type, mean age 10.2 years) completed the Interpersonal Reactivity Index (IRI), a self-reported empathy questionnaire. All children performed the 'faux pas' task and a computerized ToM task in two different sessions either with or without administration of methylphenidate (MPH). Administration of MPH was associated with an improvement in cognitive and affective ToM. Children with ADHD-combined type had significantly lower scores in total IRI and the fantasy scale compared to children with ADHD-inattentive type. We conclude that deficits in empathy and ToM may play an important role in the impairments in social cognition and peer relationship in children with ADHD, especially children a hyperactive component. Stimulants may improve ToM and empathic functions. Future studies including larger samples and additional cognitive tasks are warranted in order to generalize these results and to identify possible underlying mechanisms for improvement in ToM following the administration of MPH.

	Baseline	With MPH	*Post-hoc t tests*	P-value
Faux Pas Recognition Accuracy				
Overall Score, mean (SD)	8.87 (1.15)	9.54 (0.83)	n/a	
Control stories	4.66 (0.48)	4.79 (0.41)	-1.00	0.32
Faux Pas stories	4.21 (0.78)	4.75 (0.53)	-3.41	**<0.01**
ToM computerized task				
Overall Score, mean (SD)	-0.0996 (0.57)	0.1900 (0.52)	-2.64	**0.02**
Cognitive Index	-0.0079 (0.30)	0.1279 (0.29)	n/a	
Affective Index	-0.0917 (0.29)	0.0621 (0.25)	n/a	