

Functional Impairment: Comparison Between Attention Deficit Hyperactivity Disorder and Autistic Spectrum Disorders

Conflict of interest:
None declared

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Introduction

As neurodevelopmental disorders, Attention deficit/hyperactivity disorder (ADHD) and Autism Spectrum Disorder (ASD) share phenotypic similarities but they are characterized by different diagnostic criteria. ASD is defined by social communication dysfunction and restricted/repetitive behaviors/interests/activities while ADHD is defined by altered functioning in the areas of attention, hyperactivity, and impulsivity. Despite the principal symptom differences, between 30-50 % of individuals diagnosed with ASD also exhibit ADHD symptom and 2/3 of individuals with ADHD present ASD symptoms [1]. The co-occurrence of several symptoms like attentional difficulties, behavioural problems, language and communication with peers, hyperactivity and impulsivity, similar neuropsychological impairments in both disorders as well as genetic findings, suggest the possibility of common neurobiological substrates. Beyond these similarities, another core aspect rests on the functional impairment in significant life domains caused by the child's symptoms. The Weiss Functional Impairment Rating Scale – Parent Report (WFIRS-P) assesses ADHD symptoms and to what degree these problems impact various clinically-relevant domains of functioning [2].

Objective

The objective of this study was to assess if there was a significant difference in functional impairment measured with the WFIRS-P scale between a sample of 50 patients with ADHD and a gender-age matched sample of 50 patients with an ASD.

Methods

Subjects: One hundred patients attended at CSMIJ (Center of child mental health) of Hospital Parc Taulí Sabadell were recruited for the study, 50 had an ADHD diagnosis and 50 had an ASD diagnosis following the DSM 5 criteria. The subjects were matched by age and gender.

Scales: WFIRS-P

Statistical analysis: We conducted a chi-square test to determine the presence of significant differences between samples.

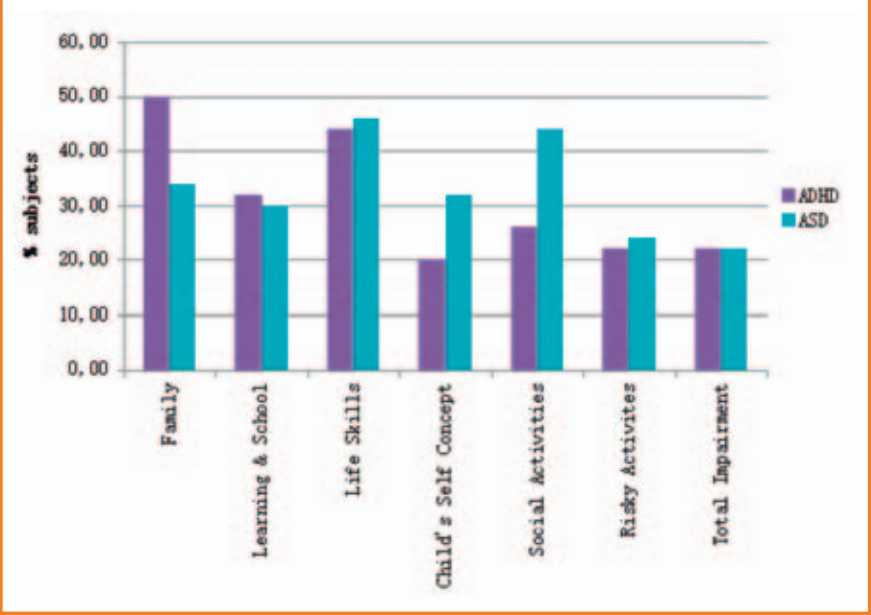
Results

No significant differences were found between the ADHD sample and the ASD sample in any of the clinically relevant domains of functioning measured with the WFIRS-P scale (table 1). We can observe higher rates of impairment in the ASD group except for the family and school domains where patients with ADHD showed greater impairment. (Fig. 1)

Table 1. Chi square test to determine significant differences in the level of functional impairment between a sample of children with ADHD and children with an ASD

	Sample	Impairment	Chi-square	Sig.
Family	ADHD	25	2,627	,105
	ASD	17		
School	ADHD	16	0,047	,829
	ASD	15		
Life Skills	ADHD	22	0,040	,841
	ASD	23		
Self Concept	ADHD	10	1,871	,171
	ASD	16		
Social Activities	ADHD	13	3,56	,059
	ASD	22		
Risky activities	ADHD	11	,056	,812
	ASD	12		
Global	ADHD	11	,000	1,000
	ASD	11		

Fig. 1. Comparison between functional impairment associated to ADHD symptoms in patients with an ADHD and patients with an ASD



Conclusions

Patients with a diagnosis of ASD showed similar rates of functional impairment measured with the WFIRS-P scale than patients with an ADHD. These results, might suggest that, as noted in recent findings, there is a high percentage of co-occurrence of symptoms in both disorders. To confirm this hypothesis, in future studies it would be of interest to specifically evaluate the presence of ADHD symptoms in ASD subjects and vice versa.

The obtained results in this study do confirm that the specific impairment associated to children with ADHD is also present in subjects with ASD and that there are no significant differences between both samples in the level of impairment in all the evaluated areas.

References

- 1- Leitner, Y. The Co-Occurrence of Autism and Attention Deficit Hyperactivity Disorder in Children. What Do We Know?. Front Hum Neurosci. 2014; 8: 268.
- 2- Gajria, K., Kosinski, M., Sikirica, V., Huss, M., Livote, E., Reilly, K., Dittmann, R.W., Erder, M.H. Psychometric validation of the Weiss Functional Impairment Rating Scale-Parent Report Form in children and adolescents with attention-deficit/hyperactivity disorder. Health Qual Life Outcomes 2015; 17: 13-184.