



Analysis of neuropsychological profiles in children with Attention Deficit Hyperactivity Disorder and Sluggish Cognitive Tempo

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Abstract

Recent studies suggest reflect on Attention Deficit Hyperactivity Disorder (ADHD) and Sluggish Cognitive Tempo (SCT), as they may be two separate disorders with different causes, symptoms, characteristics and treatments. The aim of this study was to analyze the differences in cognitive profiles of two groups of children who were diagnosed as ADHD and SCT respectively. The participants were 40 children, 20 diagnosed as ADHD and 20 as SCT, aged between 6 and 13 years. The Weschler Intelligence Scale for Children version IV (WISC-IV) was used to analyze the neuropsychological profile of the participants. A cross-sectional design was used and data were analyzed using the Mann-Whitney U test. The results showed significant differences between groups in working memory and processing speed, as well as in different subtests of these measures. This work has showed differences between the neurocognitive profiles of ADHD and SCT, which suggests that these may be different disorders or disease entities.

Introduction

The research taking place in this field studies the cognitive profile of students diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) and Sluggish Cognitive Temp (SCT) using WISC-IV Intelligence Scale as an assessment tool that allow discriminating between ADHD profiles as well as TCL profiles.

Several authors refer that SCT may be a differentiated subtype of ADHD or, even, a disorder completely different. At present, Barkley suggests this group should be called Concentration Deficit Disorder (CDD).

The aim of this study was to analyze the difference in cognitive profiles obtained through WISC-IV Scale in ADHD and SCL subjects.

Method

Participants were 30 children aged 6-13 years old, (M=8,87; SD:1,97), being 23 male gender and 7 female gender. 15 children were diagnosed with ADHD (M+ SD= age = 8,20 +- 1,62 years old. SCT was presented in 15 children (M+ SD= age = 9,73 +- 2,05 years old). WISC-IV was used to analyze the differences between both groups. Statistical data processing was done with SPSS 21.0.

Resultados

p* < .05; *p* < .01; **p* = .087; **p* = .074; **p* = .065. ^{1,2,3} indican la magnitud del tamaño del efecto (Cohen's *d*: ¹ pequeño; ² moderado; ³ grande; *d* > 0.80).



	Total		TDAH-C		TCL		Z
	M	DT	M	DT	M	DT	
CV	102.97	9.39	102.60	8.90	103.33	10.16	-.52
S	10.43	2.54	10.66	2.96	10.20	2.11	-.17
V	11.07	2.83	10.73	2.37	11.44	3.26	-.36
C	9.93	1.62	10.20	1.32	9.66	1.87	-1.09
RP	101.70	12.42	100.13	12.18	103.26	12.87	-.48
CC	9.63	2.65	9.86	2.79	9.40	2.55	-.84
CO	11.90	2.93	11.60	2.74	12.20	3.17	-.44
M	9.60	2.42	8.80	2.21	10.40	2.41	-1.45
MT	85.97	11.84	79.93	10.27	92.00	10.33	-2.81 ** ²
D	8.23	2.49	8.00	2.87	8.47	2.10	-.88
DD	6.53	1.53	6.26	1.70	6.80	1.32	-1.30
DI	5.17	1.53	4.46	1.24	5.87	1.51	-2.32 * ¹
LN	7.53	2.78	6.00	2.39	9.10	2.30	-3.07 ** ²
VP	87.53	13.24	93.80	14.68	81.27	7.98	-2.46 * ¹
CL	6.67	2.60	7.53	2.64	5.80	2.33	-1.71 * ¹
CLA	32.30	8.16	33.80	8.44	30.80	7.87	-.79
CLE	1.00	1.49	1.60	1.80	.40	.74	-2.27 * ¹
CLT	33.07	8.35	35.00	8.31	31.33	8.20	-1.02
BS	8.47	3.13	9.73	3.77	7.20	1.61	-2.34 * ¹
BSA	21.33	7.25	23.60	8.70	19.07	4.70	-1.79 * ¹
BSE	1.47	2.74	2.13	3.66	.80	1.08	-1.85 * ¹
BST	22.80	6.80	25.73	7.42	19.90	4.73	-2.38 * ¹
CIT-ICG	99.90	12.42	97.47	12.39	102.13	12.70	-1.04



Conclusions

Results make clear that different neurocognitive profiles between ADHD and SCT exist. The clinical subgroups did score significantly lower in working memory index and processing speed index.

These results may contribute to improve the interpretation of diagnostic processes performed in clinical practice using WISC-IV in the assessment protocols.