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## BACKGROUND

HD is an autosomal dominant, hereditary, and neurodegenerative disease that presents neurological, psychiatric, and cognitive impairment, with visual cognition being one of the affected areas.

## OBJECTIVES

- To analyze the visual cognition profile of asymptomatic and symptomatic carriers of Huntington's disease (HD), compared with healthy controls (HC).
- To evaluate the differences between asymptomatic and symptomatic patients with different years of progression of HD.

## METHODS

### Sociodemographics and HD characteristics

Participants: N = 99

	HC (n = 48)	HD asym (n = 17)	HD sym < 5 years (n = 13)	HD sym > 5 years (n = 21)	p
Age (years)	53.92 (11.06)	42.88 (10.16)	51 (8.64)	53.76 (12.22)	.021
Education (years)	13.29 (4.43)	12.76 (3.45)	13.15 (3.64)	12.50 (4.17)	.838
Females (%)	50	15.5	17.2	17.2	
MoCA	26.51 (2.73)	25.53 (3.82)	22 (5.18)	19.95 (5.48)	.000
UHRS	-	2.50 (3.01)	26.54 (16.17)	41.90 (26.01)	.000

HD asym = Asymptomatic HD patients; HD sym < 5 years = Symptomatic HD patients with less than 5 years of progression of the disease; HD sym > 5 years = Symptomatic HD patients with more than 5 years of progression of the disease

### Neuropsychological assessment

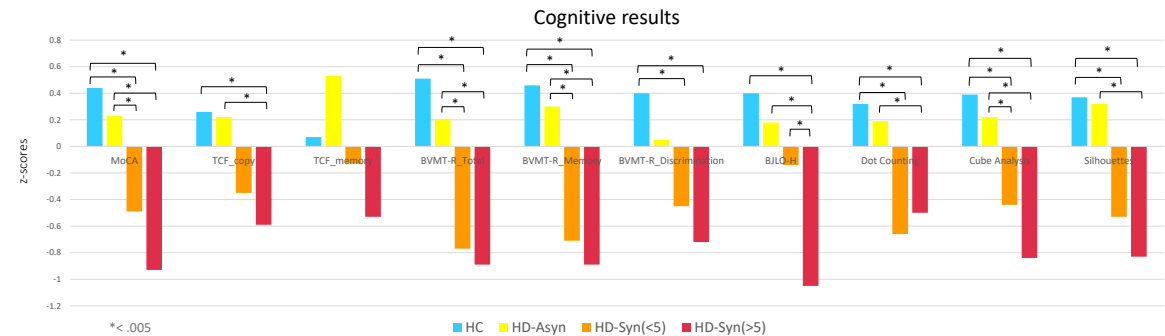
Cognitive Domains	Test
Visuoconstructive abilities	Taylor Complex Figure (TCF) (Taylor, 1969)
Visual memory	Brief Visuospatial Memory Test-Revised (BVMTR) (Benedict, 1997)
	Benton Judgement of Line Orientation- Form H (BJLO-H) (Benton et al., 1994)
Visuospatial abilities	VOSP- Dot Counting (Warrington & James, 1991)
	VOSP- Cube Analysis (Warrington & James, 1991)
	VOSP- Silhouettes (Warrington & James, 1991)

Note. VOSP = Visual Object and Space Perception Battery

### Data analysis

One way ANOVA and Tukey's test for post hoc analysis was performed to compare the cognitive performance between the four groups.

## RESULTS



- Statistically significant differences were found in the motor function ( $F_{(3,1)}=14.129$ ;  $p<.001$ ) and in the general cognitive status ( $F_{(6,1)}=9.63$ ;  $p<.001$ ) between groups.
- Specifically, we found significant differences in visual memory and visuospatial and visuoconstructive abilities between:
  - asymptomatic and both symptomatic subgroups of HD patients ( $p=.058$ ).
  - two groups of symptomatic patients with different years of evolution of HD ( $p=.014$ ).

## CONCLUSIONS

Both symptomatic and asymptomatic HD patients present an increased visual cognitive impairment compared to HC. This impairment worsens with HD progression.