

Exogenous orienting of visual-spatial attention in ADHD children

Ortega, Rodrigo

López, Vladimir

Carrasco, Ximena

Anllo-Vento, Lourdes

Aboitiz, Francisco

Visual spatial orienting of attention towards exogenous cues has been one of the attentional functions considered to be spared in ADHD. Here we present a design in which 60 (30 ADHD) children, age: 10.9 ± 1.4 , were asked to covertly orient their attention to one or two (out of four) cued locations, and search for a target stimulus in one of these locations, while recording behavioral responses and EEG/ERP. In all conditions, ADHD children showed delayed reaction times and poorer behavioral performance. They also exhibited larger cue-elicited P2 but reduced CNV in the preparation stage. Larger amplitude of CNV predicted better performance in the task. Target-elicited N1 and selection negativity were also reduced in the ADHD group compared to non-ADHD. Groups also differed in the early and late P3 time-windows. The present results suggest that exogenous orienting of attention could be dysfunctional in ADHD under certain conditions. This limitation is not necessarily caused by an impairment