



## ABSTRACT

The activity level of 14 ADHD children and 14 age-matched normal controls was assessed in six experimental conditions. These include three computer-based attention tasks, a paper-and-pencil arithmetic task, and the block design and the vocabulary subtests of the HK-WISC. Activity level was measured objectively by solid-state actigraphs worn on the non-dominant hands of the subjects for an average of about one and a half hour. Results reveal that ADHD children show a higher activity level than the normal in all except the block design test. There are significant group differences ( $p < .05$ ) in activity level in all three attention tests and the vocabulary test. The pervasive disturbance in activity of ADHD supports the update of the diagnostic criteria of the DSM-IV. The deficit in response inhibition of ADHD children and the optimal stimulation theory were used to explain our results.