Dysfunction of Time Perception in Children and Adolescents with Attention-Deficit Hyperactivity Disorder.

Shin DW, Lim SW, Shin YC, Oh KS, Kim EJ, Kwon YY.

DOI: [http://dx.doi.org/10.5765/jkacap.2016.27.1.48](http://dx.doi.org/10.5765/jkacap.2016.27.1.48)

Abstract

OBJECTIVES:
Children with attention-deficit hyperactivity disorder (ADHD) may have deficits in time perception, as assessed by the time estimation task and the time reproduction task, however its age-related trajectory is not yet determined. Therefore we examined the correlation between accuracy of time perception tasks and age, and the association between accuracy of estimation tasks and reproduction tasks.

METHODS:
Sixty-three patients with ADHD, aged 8 to 18 years tested the tasks for five time durations (2, 4, 12, 45, and 60 seconds). Accuracy of tasks was assumed differences (absolute values) between raw results of tasks and original time durations. Spearman's correlation analysis was performed to determine correlation between accuracy of time perception tasks and age. Multivariate regression was used to determine the association of accuracy of estimation tasks with accuracy of reproduction tasks.

RESULTS:
Age showed correlation with accuracy of estimation tasks, but not with that of reproduction tasks. We observed that the higher the accuracy in 12, 45, and 60 seconds duration time reproduction, the higher the accuracy in longer seconds duration time estimation.

CONCLUSION:
Age was correlated with time estimation accuracy whereas there was no impact on time reproduction accuracy. Association of each of the two time perception tasks, particularly in longer time duration, suggested specific impairments in time perception.