

---

# Flanker performance in female college students with ADHD: a diffusion model analysis.

Merkt J, Singmann H, Bodenburg S, Goossens-Merkt H, Kappes A, Wendt M, Gawrilow C.

Center for Individual Development and Adaptive Education of Children at Risk (IDeA),  
Solmsstraße 73, 60486, Frankfurt, Germany, [merkt@dipf.de](mailto:merkt@dipf.de).

Atten Defic Hyperact Disord. 2013 May 28. [Epub ahead of print]

Attention-deficit hyperactivity disorder (ADHD) is characterized by poor adaptation to environmental demands, which leads to various everyday life problems. The present study had four aims: (1) to compare performance in a flanker task in female college students with and without ADHD (N = 39) in a classical analyses of reaction time and error rate and studying the underlying processes using a diffusion model, (2) to compare the amount of focused attention, (3) to explore the adaptation of focused attention, and (4) to relate adaptation to psychological functioning. The study followed a 2-between (group: ADHD vs. control) × 2-within (flanker conflict: incongruent vs. congruent) × 2-within (conflict frequency: 20 vs. 80 %) design. Compared to a control group, the ADHD group displayed prolonged response times accompanied by fewer errors in a flanker task. Results from the diffusion model analyses revealed that the members of the ADHD group showed deficits in non-decisional processes (i.e., higher non-decision time) and leaned more toward accuracy than participants without ADHD (i.e., setting higher boundaries). The ADHD group showed a more focused attention and less adaptation to the task conditions which is related to psychological functioning. Deficient non-decisional processes and poor adaptation are in line with theories of ADHD and presumably typical for the ADHD population, although this has not been shown using a diffusion model. However, we assume that the cautious strategy of trading speed of for accuracy is specific to the subgroup of female college students with ADHD and might be interpreted as a compensation mechanism.