

SYMPTOM DIMENSIONS AND NEUROCOGNITIVE FUNCTIONING IN ADULT ADHD

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(Abstract)

Ongoing controversies regarding the clinical and nosological status of ADHD in adults emphasize the need for studies examining whether *DSM-IV* ADHD symptom dimensions and subtypes identified in research with children are valid for adults. Firm symptom criteria validated by data from adult samples have not been developed. Moreover, many clinic-referred adults present with attentional complaints and exhibit symptoms, neurocognitive weaknesses, and secondary problems similar to those seen in ADHD. However, data are mixed regarding the profile of neurocognitive deficits involved in adult expressions of ADHD, and it is unknown whether patterns of weakness in neurocognitive performance can be identified that reliably discriminate adults with ADHD from those with other neurobehavioral disorders (e.g., learning disabilities, LD). The purpose of this study was to further (a) evaluate the discriminant validity of *DSM-IV* ADHD in adults, (b) examine the nature and severity of neurocognitive deficits in adult ADHD, and (c) clarify the diagnostic utility of executive functioning measures among clinic-referred adults.

Overall, results supported the discriminant validity of adult ADHD, but little support emerged for the existence of separate *DSM-IV* subtypes. Importantly, symptom ratings supported the existence of two broad symptom domains consistent with those delineated in *DSM-IV*. Moreover, principal components analysis of neuropsychological data identified three dimensions of neurocognitive executive functioning (EF; verbal working memory; sustained *intention*; and effortful learning) in which ADHD adults (n=35) performed

significantly less well than those who received an LD diagnosis (n=24) or no diagnosis (n=21). Furthermore, composite scores in these EF domains generated correct classifications that were significantly better than chance when classifying adults that (a) did and did not meet criteria for ADHD, (b) met criteria for ADHD or LD, and (c) met criteria for ADHD or no clinical diagnosis. Classification results were robust when submitted to a jackknife (leave-one-out) validation procedure. Finally, results provided general support for the developmental lag hypothesis of frontal-subcortical functioning in ADHD when considered vis-à-vis child ADHD data, but findings also supported the notion that ADHD in adults is associated with continuing dysfunction in specific neuroanatomical pathways believed to subservise executive attentional functions (e.g., dorsolateral prefrontal-subcortical; anterior cingulate-subcortical; orbitofrontal-subcortical).