



Live Seminar Update
December 2013

Kevin T. Blake, Ph.D. P.L.C.
Cross Country Education

Therapy Dogs and AD/HD

“Objective: The objective of this study was to provide preliminary findings from an ongoing randomized clinical trial using a canine-assisted intervention (CAI) for 24 children with ADHD. Method: Project Positive Assertive Cooperative Kids (P.A.C.K.) was designed to study a 12-week cognitive-behavioral intervention delivered with or without CAI. Children were randomly assigned to group therapy with or without CAI. Parents of children in both groups simultaneously participated in weekly parent group therapy sessions...”

Therapy Dogs and AD/HD

“... Results: Across both treatment groups, parents reported improvements in children’s social skills, prosocial behaviors, and problematic behaviors. In both groups, the severity of ADHD symptoms declined during the course of treatment; however, children who received the CAI model exhibited greater reductions in the severity of ADHD symptoms than did children who received cognitive-behavioral therapy without CAI. Conclusion: Results suggest that CAI offers a novel therapeutic strategy that may enhance cognitive-behavioral interventions for children with ADHD.

Schuck, S.E.B., et al. (September 23, 2013). Canine-Assisted Therapy for Children With ADHD: Preliminary Findings From The Positive Assertive Cooperative Kids Study. Journal of Attention Disorders, doi: 10.1177/1087054713502080 .

Regarding AD/HD Diagnosis

“Reducing the threshold for diagnosing ADHD devalues the diagnosis in those with serious problems. A conservative stepped diagnostic approach could reduce the risk of overdiagnosis” (p. 347).

Thomas, R., et al. (November 5, 2013). Too Much Medicine: Attention-deficit/hyperactivity disorder: are we helping or harming? British Medical Journal, doi: <http://dx.doi.org/10.1136/bmj.f6172>, 247.

Early Motor Performance and Academics

“...Poorer motor performance was associated with worse academic skills in children, especially among boys. These findings emphasize early identification of children with poor motor performance and actions to improve these children's motor performance and academic skills during the first school years.”

Haapala, E. A., et al. (October 11, 2013). Associations of Motor and Cardiovascular Performance with Academic Skills in Children. Medicine and Science In Sports and Exercise, doi: 10.1249/MSS.0000000000000186.

ASD+AD/HD & Emotion Recognition

“Our findings suggest that emotion recognition might be a viable endophenotype in ASD and a fruitful target in future family studies of the genetic contribution to ASD and comorbid ADHD. Furthermore, our results suggest that children with comorbid ASD and ADHD are at highest risk for emotion recognition problems.”

Oerlemans, A.M., et al. (July, 2013). Recognition of facial emotion and affective prosody in children with ASD (+ADHD) and their unaffected siblings. European Child and Adolescent Psychiatry, DOI: 10.1007/s00787-013-0446-2.

Decoding Faces and AD/HD

“Children with ADHD exhibited a general deficit in decoding emotional facial expressions, with specific deficit in identifying anger and sadness. Self-rating of the task difficulty revealed lack of awareness of decoding errors in the ADHD group as compared with control subjects. Within the ADHD group, there was a significant correlation between interpersonal problems and emotional facial expression decoding impairment, which was more marked for anger expressions. These results suggest suboptimal nonverbal decoding abilities in ADHD that may have important implications for therapy” (p. 93).

Pelc, K., et al. (August, 2006). Recognition of emotional facial expressions in attention-deficit hyperactivity disorder. Pediatric Neurology, 35(3), 93-97.

Decoding Faces and AD/HD

“Attention deficits in boys with ADHD seemed to account for their difficulty in recognizing facial expressions of emotion. Effective treatment for attention deficits is expected to have a beneficial effect on facial emotion recognition in boys with ADHD” (p. 323)

Shin, D.W., et al. (December, 2008). Visual attention deficits contribute to impaired facial emotion recognition in boys with attention-deficit/hyperactivity disorder. Neuropediatrics, 39(6), 323-327.

Decoding Faces and AD/HD

“The results of our study suggested that facial emotion recognition may be closely associated with ADHD, after controlling for covariates, although more research is needed” (p. 83).

An, N.Y., et al. (June, 2013). Difficulty in Facial Emotion Recognition in Children with ADHD. Journal of the Korean Academy of Child and Adolescent Psychiatry, 24(2), 83-89.

Using MRI to Diagnose Dyslexia in Preschoolers

“The volume and fractional anisotropy of the left arcuate showed a particularly strong positive correlation with a phoneme blending test. Whole-brain regressions of behavioral scores with diffusion measures confirmed the unique relation between phonological awareness and the left arcuate. These findings indicate that the left arcuate fasciculus, which connects anterior and posterior language regions of the human brain and which has been previously associated with reading ability in older individuals, is already smaller and has less integrity in kindergartners who are at risk for dyslexia because of poor phonological awareness. These findings suggest a structural basis of behavioral risk for dyslexia that predates reading instruction” (p. 13251).

Reference

**Zeynep M. Saygin, et al. (August, 2013).
Tracking the Roots of Reading Ability: White
Matter Volume and Integrity Correlate with
Phonological Awareness in Prereading and
Early-Reading Kindergarten Children. Journal
of Neuroscience, 33(33):13251-13258;
doi:10.1523/JNEUROSCI.4383-12.2013.**

Diagnosing Autism In Infancy

“Deficits in eye contact have been a hallmark of autism since the condition’s initial description. They are cited widely as a diagnostic feature⁴ and figure prominently in clinical instruments; however, the early onset of these deficits has not been known. Here we show in a prospective longitudinal study that infants later diagnosed with autism spectrum disorders (ASDs) exhibit mean decline in eye fixation from 2 to 6 months of age, a pattern not observed in infants who do not develop ASD. These observations mark the earliest known indicators of social disability...”

Diagnosing Autism In Infancy

“...in infancy, but also falsify a prior hypothesis: in the first months of life, this basic mechanism of social adaptive action—eye looking—is not immediately diminished in infants later diagnosed with ASD; instead, eye looking appears to begin at normative levels prior to decline. The timing of decline highlights a narrow developmental window and reveals the early derailment of processes that would otherwise have a key role in canalizing typical social development. Finally, the observation of this decline in eye fixation—rather than outright absence—offers a promising opportunity for early intervention that could build on the apparent preservation of mechanisms subserving reflexive initial orientation towards the eyes.”

Reference

**Jones, W., and Klin, A. (November 6, 2013).
Attention to eyes is present but in decline in
2–6-month-old infants later diagnosed with
autism. doi:10.1038/nature12715.**

Is AD/HD Just a Disorder of Americans?

“A total of 50 studies were identified from a MEDLINE search for the terms ADHD, ADD, HKD, or attention-deficit/hyperactivity disorder and prevalence combined, for the years 1982 to 2001. 20 were studies in US populations and 30 were in non-US populations. Analysis of these studies suggests that the prevalence of ADHD is at least as high in many non-US children as in US children, with the highest prevalence rates being seen when using DSM-IV diagnoses. Recognition that ADHD is not purely an American disorder and that the prevalence of this behavioral disorder in many countries is in the same range as that in the USA will have important implications for the psychiatric care of children” (p. 104).

Faraone, S.V., et al. (June 2003). The worldwide prevalence of ADHD: is it an American condition? World Psychiatry, 2(2): 104–113.

Genetics & AD/HD

“The present analysis shows an association between common variants in 3 genetic pathways and the hyperactive/impulsive component of ADHD. This study demonstrates that pathway-based association analyses, using quantitative measurements of ADHD symptom domains, can increase the power of genetic analyses to identify biological risk factors involved in this disorder” (p. 1204).

Bralten, J., et al. (November, 2013). Candidate Genetic Pathways for Attention-Deficit/Hyperactivity Disorder (ADHD) Show Association to Hyperactive/Impulsive Symptoms in Children With ADHD. Journal of the American Academy of Child & Adolescent Psychiatry, 52(11), 1204-1212.

1 in 10 Children AD/HD

“Approximately 2 million more U.S. children/adolescents aged 4 to 17 years had been diagnosed with ADHD in 2011, compared to 2003. More than two-thirds of those with current ADHD were taking medication for treatment in 2011. This suggests an increasing burden of ADHD on the U.S. health care system. Efforts to further understand ADHD diagnostic and treatment patterns are warranted.”

Visser, S.N., et al. (November 25, 2013). Trends in the Parent-Report of Health Care Provider-Diagnosed and Medicated Attention-Deficit/Hyperactivity Disorder: United States, 2003–2011. [Journal of the American Academy of Child & Adolescent Psychiatry](https://doi.org/10.1016/j.jaac.2013.09.001), doi:10.1016/j.jaac.2013.09.001

TEACCH Program & ASD

“The results suggested that TEACCH effects on perceptual, motor, verbal and cognitive skills were of small magnitude in the meta-analyzed studies. Effects over adaptive behavioral repertoires including communication, activities of daily living, and motor functioning were within the negligible to small range. There were moderate to large gains in social behavior and maladaptive behavior...”

TEACCH Program & ASD

“... The effects of the TEACCH program were not moderated by aspects of the intervention such as duration (total weeks), intensity (hours per week), and setting (home-based vs. center-based). While the present meta-analysis provided limited support for the TEACCH program as a comprehensive intervention, our results should be considered exploratory owing to the limited pool of studies available.

Reference

Virues-Ortega, J., et al. (December 1, 2013). The TEACCH Program for Children and Adults with Autism: A Meta-Analysis of Intervention Studies. Clinical Psychology Review, 33(8), 940–953.

The Splenia is Smaller in those with NVLD than those with ASD

“This finding indicates that higher functioning children on the autistic spectrum do not have smaller corpus callosi as has been found in previous research with heterogeneous samples. Following segmentation of the corpus callosum, the NLD group was observed to have significantly smaller splenia compared to all other groups. Smaller splenia in the NLD group was associated with lower WASI PIQ scores but not WASI VIQ scores...”

The Splenia is Smaller in those with NVLD than those with ASD

“...Children with HFA were observed to have larger midbody areas than children with NLD and neurotypically developing children. Children with HFA and NLD demonstrated behavioral symptoms of inattention and hyperactivity similar to the ADHD groups indicating that corpus callosum differences seen in the NLD and HFA groups are not related to these behaviors.

Reference

Jodene Goldenring Fine, Kayla A. Musielak & Margaret Semrud-Clikeman (November 12, 2013). Smaller splenium in children with nonverbal learning disability compared to controls, high-functioning autism and ADHD. Child Neuropsychology: A Journal on Normal and Abnormal Development in Childhood and Adolescence, DOI: [10.1080/09297049.2013.854763](https://doi.org/10.1080/09297049.2013.854763)

Computer Programs for AD/HD Treatment

“Collectively, meta-analytic results indicate that claims regarding the academic, behavioral, and cognitive benefits associated with extant cognitive training programs are unsupported in ADHD. The methodological limitations of the current evidence base, however, leaves open the possibility that cognitive training techniques designed to improve empirically documented executive function deficits may benefit children with ADHD”.

Reference

Rappoport, M.D., et al. (August 16, 2013). Do programs designed to train working memory, other executive functions, and attention benefit children with ADHD? A meta-analytic review of cognitive, academic, and behavioral outcomes. Clinical Psychology Review, doi: 10.1016/j.cpr.2013.08.005.

Reference

Handler, S.M., and Fierson, W.M. (March 1, 2011). Learning Disabilities, Dyslexia, and Vision. Pediatrics, 127(3), pp. e818 -e856 (doi: 10.1542/peds.2010-3670).