September 2016 Updates

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AD/HD

AD/HD & Personality Disorders

Barkley recently wrote that between 15 and 28 percent of adults with AD/HD have comorbid antisocial personality disorder, 19 to 33 percent have passive-aggressive personality disorder, 13 to 30 percent have borderline personality disorder, 18 present have avoidant personality disorder, and 28 percent meet criteria for paranoid personality disorder.

Barkley, R.A. (August 2016). Research. The AD/HD Report, 24(5), 6.

AD/HD & Personality Disorders

Scientists recently found that AD/HD adults with comorbid paranoid, schizoid, schizotypal, borderline, narcissistic, histrionic, of antisocial personality disorder, passive-aggressive, or more than one personality disorder are more likely to drop out of AD/HD medication studies. Those with narcissistic and/or schizoid personalities are particularly more likely to drop out. They also found the subjects with comorbid AD/HD and personality disorder(s) that their AD/HD symptoms tended to improve with stimulant medication.

Gift, T.E. et al. (May 2016). Personality Disorder in Adult Attention-Deficit/Hyperactivity Disorder: Attrition and Change During Long-term Treatment. Journal of Nervous & Mental Disease. DOI: 10.1097/NMD.0000000000000470.

AD/HD and Exercise

AD/HD children living in poor urban settings were given a 10 week after school exercise program and researchers recorded their cognitive skills, physiological and participation levels. At the end of the study 86% of the children remained in the program. Parents were asked to rate their children's behavior throughout, but unlike other such studies, no significant difference was found. However, while the children were doing the exercise they were less oppositional/defiant and had better working memory. The researchers concluded routine engaging activities that uses behavior management methods and offer adult attention are vital for such children.

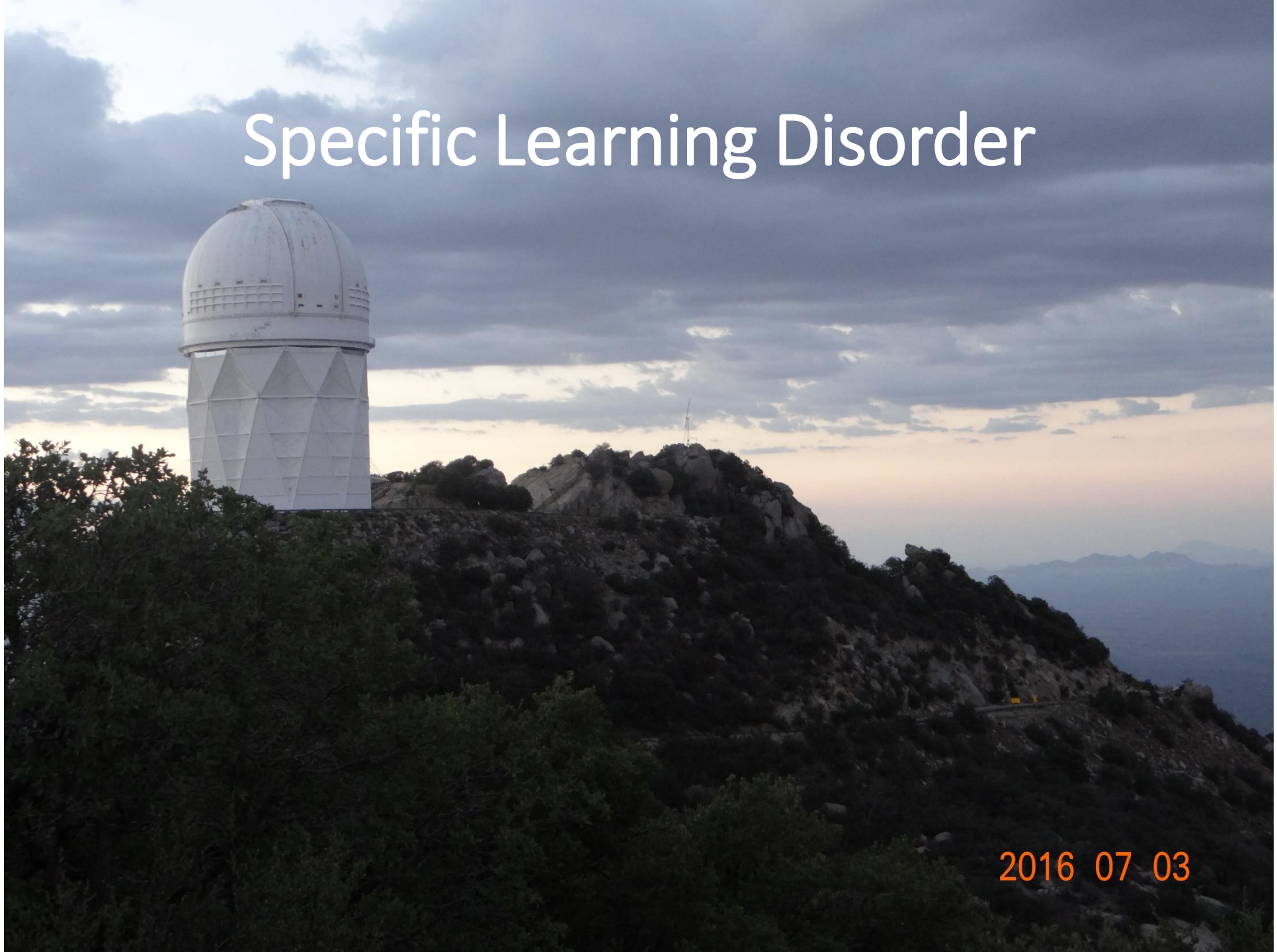
Bustamante, E.E. et al. (July, 2016). Randomized Controlled Trial of Exercise for ADHD and Disruptive Behavior Disorders. Medicine and Science in Sport and Exercise. DOI: 10.1249/MSS.0000000000000891

AD/HD and Injury Risk

Researchers recently investigated a large group of AD/HD adults and found they were to have a significantly increased risk of injury, particularly if they have a comorbid mental disorder; however; the use of stimulant medications reduced this risk. They also found that adults with AD/HD were 7.9 times more likely to have comorbid psychosis, .5 times more likely to have drug induced psychosis, and 6 times more likely to have a personality disorder than the general public.

Merrill, R.M. et al. (February 1, 2016). Risk of Injury According to Attention Deficit Hyperactivity Disorder, Comorbid Mental Illness, and Medication Therapy. Pharmacopsychiatry. DOI: 10.1055/s-0035-1565132.

Specific Learning Disorder



Five Factors of Dyslexia

Researchers from the Netherlands found that 5 factors differentiated students with dyslexia from the typical student. These factors were found to account for 60% of the variance. They were phonology, spelling, whole word processing, short-term memory and rhyme confusion. They were not able to confirm if there are subtypes of dyslexia or not.

Tamboer, T. et al. (November 14, 2014). Five Describing Factors of Dyslexia. Journal of Learning Disabilities. DOI: 10.1177/0022219414558123.

Factors Effecting Adults with Specific Learning Disability Who Have Graduated From College

Australian scientists interviewed 45 college graduates with SLD and discovered they found the disability services they received in college, for the most part, helpful. After graduation they said their cognitive difficulties still caused them difficulty in their personal and work lives. The affective they learned in college caused them few problems and they said they helped.

Russak, S. et al. (November 27, 2015). A follow-up study of graduates with learning disabilities from a college of education: impact of the disability on personal and professional life. Australian Journal of Learning Difficulties. DOI: 10.1080/19404158.2015.1112296.

Concrete Vs. Virtual Manipulative Use by Students with Dyscalculia

American researchers investigated teaching algebra to three high school students with dyscalculia using concrete and virtual manipulatives. After 30 teaching sessions the students could solve 90% of the questions presented to them. However, it appeared the concrete manipulatives worked better than the virtual.

Rajiv, S. et al. (May 19, 2016). Comparing the Effectiveness of Virtual and Concrete Manipulatives to Teach Algebra to Secondary Students With Learning Disabilities. Learning Disabilities Quarterly. DOI: 10.1177/0731948716649754.

Concussion, AD/HD and SLD

American and Canadian scientists found that high school athletes with AD/HD and/or SLD had significantly more concussions that those without such differences. Boy with SLD and/or AD/HD had more concussions than girls with the differences, but such girls were more apt to have concussions than their non-disabled female peers. Finally, no cumulative effect of having SLD and AD/HD comorbidly was found.

Iverson, G.L. (July 16, 2016). High School Athletes With ADHD and Learning Difficulties Have a Greater Lifetime Concussion History. Journal of Attention Disorders. DOI: 10.1177/1087054716657410.

8 Year Follow-up of German MTA Study

German researchers conducted a follow-up study of AD/HD stuents who were in a study 8 years previously that compared behavioral techniques to medication treatment. At the time of the follow-up the students were between 15 and 22 years old, and 68 % of the subjects from the first experiment were able to be reassessed. The scientists concluded that the original multimodal treatments administered in childhood were still effective in young adulthood. They found long-term medication use had nothing to do with good outcome.

Dopfner, M. et al. (July 22, 2016). Long-Term Course After Adaptive Multimodal Treatment for Children With ADHD: An 8-Year Follow-Up. Journal of Attention Disorders. DOI: 10.1177/1087054716659138.

Continuous Performance Tests in Diagnosing AD/HD

South Korean scientists found that continuous performance tests (CPT) are of no use in diagnosing AD/HD in children.

Park, J. et al. (July 12, 2016). Clinical Use of Continuous Performance Tests to Diagnose Children With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054716658125.

Weiss Functional Impairment Rating Scale

Researchers found the Weiss Functional Impairment Rating Scale psychometrically supported in measuring functional impairment in AD/HD adults.

Canu, W.H. et al. (August 1, 2016). Psychometric Properties of the Weiss Functional Impairment Rating Scale: Evidence for Utility in Research, Assessment, and Treatment of ADHD in Emerging Adults. Journal of Attention Disorders. DOI: 10.1177/1087054716661421.

Story Method of Assessing Working Memory

American researchers found the story recall method of assessing working memory is more accurate than number recall in AD/HD adults and teens.

Kennedy, R.J. et al. (August 1, 2016). Comparison of Two Measures of Working Memory Impairments in 220 Adolescents and Adults With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054716661232.

Using CBT in Teens with AD/HD

Researchers form Boston investigated the use of cognitive behavioral therapy (CBT) with adolescents with AD/HD who were medicated for their disorder to a control group of adolescents with AD/HD taking medication without receiving CBT. They found the symptoms of those receiving CBT significantly improved over the control group.

Sprich, S.E. et al. (March 17, 2016). A randomized controlled trial of cognitive behavioral therapy for ADHD in medication-treated adolescents. Journal of Child Psychology and Psychiatry. DOI: 10.1111/jcpp.12549.

AD/HD, Medication & Epilepsy

Canadian researchers reviewed the literature related the use of methylphenidate with children with AD/HD and epilepsy. They concluded that the majority of the studies indicated the medication helped with the AD/HD symptoms and did not cause an increase of epilepsy symptoms. However, they indicated most of the studies in the literature had methodological difficulties.

Ravi, M. et al. (February 1, 2016). Epilepsy, Attention-Deficit/Hyperactivity Disorder and Methylphenidate: Critical Examination of Guiding Evidence. Journal of the Canadian Academy of Child and Adolescent Psychiatry. PMCID: PMC4791106.

Emotions, Personality Disorders and AD/HD

Researchers examined the hot and cold emotional circuits of individuals with AD/HD and personality disorders such as borderline personality disorder, and antisocial personality disorder and found the neuroanatomies of the tree disorder in these circuits are very similar. The cool circuit is more related to AD/HD which would cause more impulsivity and inattention, however.

Petrovic, P. et al. (May 23, 2016). Top-Down Dysregulation—From ADHD to Emotional Instability. Frontiers of Behavioral Neuroscience. DOI: 10.3389/fnbeh.2016.00070.

Internet Gaming and AD/HD

Researchers found that young adults with AD/HD and high impulsivity and hostility are significantly more at risk of being addicted to internet gaming.

Yen, J.Y. et al. (April 2016). Association between Internet gaming disorder and adult attention deficit and hyperactivity disorder and their correlates: Impulsivity and hostility. Addictive Behaviors. DOI: http://dx.doi.org/10.1016/j.addbeh.2016.04.024.

CBT with Adult AD/HD

British researchers reviewed the literature related to the use of cognitive behavioral Therapy to treat AD/HD in adults and found it supported the efficacy of the technique with the population.

Young, Z. et al. (August 22, 2016). The Efficacy of Cognitive Behavioral Therapy for Adults With ADHD: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Journal of Attention Disorders. DOI: 10.1177/1087054716664413.

Combined type AD/HD and Comorbidity

Turkish researchers recently found that AD/HD Combined Type (AD/HD, CT) children and adolescents have a comorbidity 70.2%of the time. AD/HD, CT children and adolescents have oppositional defiant disorder 54.6% of the time, conduct disorder 12% of the time, depression 8.1% and obsessive-compulsive disorder 8%.

Berrin Inci, S. et al. (August 31, 2016). Psychiatric Comorbidity and Demographic Characteristics of 1,000 Children and Adolescents With ADHD in Turkey. Journal of Attention Disorders. DOI: 10.1177/1087054716666954.

Sluggish Cognitive Tempo in Adults

American scientists found that adults with sluggish cognitive tempo (SCT) have symptoms that are associated with inattentive AD/HD, internalizing (anxiety/depression, but not at clinically significant levels), and executive function difficulties in problem solving and organization.

Liekauf, J. E. et al. (July 21, 2016). Sluggish Cognitive Tempo, Internalizing Symptoms, and Executive Function in Adults With ADHD. Journal of Attention Disorders. DOI: 10.1177/1087054716659361.


Autism
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High Functioning Autism, Self-Regulation & Quality of Life

Researchers from the Netherlands found that adults with high functioning autism typically have executive function difficulties, problems processing emotions, and poor qualities of life.

Dijkhuis, R.R. et al (July 11, 2016). Self-regulation and quality of life in high-functioning young adults with autism. Autism. DOI: 10.1177/1362361316655525.

Reading Comprehension in High Functioning Autism

A researcher from Australia reviewed the literature related to teaching reading comprehension to students with high functioning autism and found that they should be taught language/reading decoding, language comprehension, and metacognitive language processing directly. Developing their language and social skills will help, to along with learning to integrate verbal and visual strategies of learning.

Woolley, G. (May 12, 2016). Reading comprehension intervention for high-functioning children with autism spectrum disorders. Australian Journal of Learning Difficulties. DOI: 10.1080/19404158.2016.1190770.

Autism & Skateboarding

American researchers conducted a case study with an 11 year old boy with autism teaching him 5 sets of skateboarding skills through behavioral modeling and an additional skill. His skateboarding skills improved significantly as did the additional skill.

Thomas, B.R. et al. (September 8, 2016). Brief Report: Using Behavioral Skills Training to Teach Skateboarding Skills to a Child with Autism Spectrum Disorder. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-016-2900-8.

Job Coaches, Bug-In-The Ear & Autism

A pilot study was conducted at Vanderbilt University in which adults with autism, or intellectual disability were given live job coaching by the coach being in close proximity in the same room as the subject and by the job coach through a bug-in-the-ear device. All participants found the bug-in-the-ear device less intrusive and more beneficial.

Gibson, C.B. et al. (August 29, 2016). Promoting Social Interactions and Job Independence for College Students with Autism or Intellectual Disability: A Pilot Study. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-016-2894-2.

Sexuality and Autism

A literature review and meta-analysis was conducted of nine studies of the sexual/romantic behavior of adults with autism. The findings showed that females with high functioning autism had significantly more negative sexual experiences than males with autism. Males with autism were more likely to desire more masturbation and sex with a partner than females with autism.

Pecora, L.A. et al (August 27, 2016). Sexuality in High-Functioning Autism: A Systematic Review and Meta-analysis. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-016-2892-4.

Autism & Social Skills Simulators

Researchers from Johns Hopkins and the University of Virginia found that social skills training by a coach using reality and a social skills simulator with guided practice can significantly improve social skills and reduce behavior difficulties.

Pas, E.T. et al. (2016). Reducing Behavior Problems Among Students with Autism Spectrum Disorder: Coaching Teachers in a Mixed-Reality Setting. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-016-2898-y.

Eye Fixations, Social Interaction and Autism

British, Canadian and American scientist found that children with autism failed to detect social oddities on their first eye fixation lie their non-impaired peers, they were eventually able to see the oddities, but they needed several eye fixations and revisits their peers did not need.

Hence, they are slower in social processing and one cannot "reroll the tape" in real life social situations.

Benson, V. et al. (November 28, 2015). Looking, seeing and believing in autism: Eye movements reveal how subtle cognitive processing differences impact in the social domain. Autism Research. DOI: 10.1002/aur.1580.

Autism and Facial Processing

Chinese researchers applied a machine learning algorithm to the facial processing eye scanning of children with autism and were able to identify those with autism 88.25% of the time.

Lui, W. et al. (April 1, 2016). Identifying children with autism spectrum disorder based on their face processing abnormality: A machine learning framework. Autism Research. DOI: 10.1002/aur.1615.

Self-Injurious Behavior & Autism

A recent population based study indicated 27.8% of children with autism engage in self-injurious behavior. The researchers suggested that clinicians always look for this behavior in children with autism.

Soke, G.N. et al. (August 26, 2016). Brief Report: Prevalence of Self-injurious Behaviors among Children with Autism Spectrum Disorder—A Population-Based Study. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-016-2879-1.

Miscellaneous

Acetaminophen Exposure in Utero

British researchers discovered children exposed to acetaminophen in utero are significantly more at risk of having behavior problems later in life.

Stergiakoul, E. et al. (August 15, 2016). Association of Acetaminophen Use During Pregnancy With Behavioral Problems in Childhood: Evidence Against Confounding. JAMA Pediatrics. DOI: 10.1001/jamapediatrics.2016.1775.

Dogs' Understanding of Human Language

Researchers from the University of Vienna trained dogs to lye quietly in an fMRI scanner while being exposed to human voices. The scanner measured their brain activity. Like humans they processed meaningful words in their left hemisphere, and processed voice intonation in their right hemisphere. Their reward centers (nucleus of acumens) activated when they heard words of praise with matched intonation. The scientists believe this indicates dogs can analyze and integrate word meaning and intonation without being able to speak.

Andics, A. et al. (September 2, 2016). Neural mechanisms for lexical processing in dogs. Science. DOI: 10.1126/science.aaf3777.