

April/May, 2017 Updates

AD/HD & Substance Abuse/Use

Researchers found AD/HD youth had significantly less positive models who resist substance abuse/use and find themselves in fewer situations where substance abuse/use would not be expected. They believed that drug education would be a way to combat these findings.

Jensen, P.S. et al. (April 19, 2017). Turning Points in the Lives of Youth of With/Without ADHD: Are They Linked to Changes in Substance Use? Journal of Attention Disorders. DOI: 10.1177/1087054717700977.

Sluggish Cognitive Tempo (SCT) and AD/HD

Spanish scientists found that 7 to 10 year olds with SCT have significantly slower reaction times for attentional network tasks and did significantly worse than AD/HD children on n-back tasks. Additionally, symptom profiles compiled by the children's parents and teachers significantly differed from those of the AD/HD group.

Camprodon-Rosanas, E. et al. (April 11, 2017). Association Between Sluggish Cognitive Tempo Symptoms and Attentional Network and Working Memory in Primary Schoolchildren. Journal of Attention Disorders. DOI: 10.1177/1087054717702245.

Visual-Spatial Reward Deficits

Turkish scientists compared typically developing and AD/HD children using an fMRI scanner while completing a visual-spatial attention task which provided feedback and reward. The typically children had greater activation of their ventricle anterior thalamus in response to predicting rewards and had no activation for non-reward stimuli. The AD/HD children demonstrated the opposite response. The researchers concluded, “...ADHD is associated with difficulty integrating reward contingency information with the orienting and regulatory phases of attention.”

Metin, B et al. (April 19, 2017). Reward Processing Deficits During a Spatial Attention Task in Patients With ADHD: An fMRI Study. Journal of Attention Disorders. DOI: 10.1177/1087054717703188.

Visual & Auditory Executive Function and AD/HD

Israeli researchers found children with AD/HD were significantly less responsive to auditory cuing than typical children. They also found that methylphenidate made the biggest change for the better in Hyperactive/Impulsive AD/HD children in both visual and auditory cuing.

Hadar, Y. et al. (April 7, 2017). Auditory and Visual Executive Functions in Children and Response to Methylphenidate: A Randomized Controlled Trial. Journal of Attention Disorders. DOI: 10.1177/1087054717700978.

Borderline Personality Disorder Vs. AD/HD

Scientists from several countries conducted a study comparing the social emotional regulation skills of adults with AD/HD, or borderline personality disorder as well as typical adults. They found there was no difference between the adults with AD/HD and those with Borderline Personality Disorder in terms of being able to attend an obnoxious event and control their impulsivity. They were significantly impaired compared to typical adults in this regard.

Cavelti, M. et al. (April 2, 2017). A Comparison of Self-Reported Emotional Regulation Skills in Adults With Attention-Deficit/Hyperactivity Disorder and Borderline Personality Disorder. Journal of Attention Disorders. DOI: 10.1177/1087054717698814.

Epigenetics and AD/HD

Epigenetics is a branch of genetics that investigates what part environmental stress causes genetic change in individuals. A group of researchers from Algeria reviewed the epigenetic research related to AD/HD and stated a critical site on the DRD4 gene may be effected enough by environmental stress to help in creating AD/HD.

Hamza, M. et al. (March 9, 2017). Epigenetics and ADHD: Toward an Integrative Approach of the Disorder Pathogenesis. Journal of Attention Disorders. DOI: 10.1177/1087054717696769.

Pathological Gambling and AD/HD

Swiss researchers found that there is a high rate of comorbidity between adult AD/HD and pathological gambling. The outcomes of those with this comorbidity was far worse and substance problems made it even more worse.

Brandt, L. et al. (February 5, 2017). Adult ADHD Is Associated With Gambling Severity and Psychiatric Comorbidity Among Treatment-Seeking Problem Gamblers. Journal of Attention Disorders. DOI: 10.1177/1087054717690232.

Specific Learning Disorder



Dyslexia and Psychiatric Comorbidity

Hungarian researchers found that children diagnosed as dyslexic early in life were more apt to have internalizing disorders than externalizing disorders than typical children. Those diagnosed later in life were more apt to have both internalizing and externalizing disorders than those who were diagnosed earlier and typically developing children.

Tarnokine Toro, K. et al. (April 13, 2017). Reading Disability Spectrum: Early and Late Recognition, Subthreshold, and Full Comorbidity. Journal of Learning Disabilities. DOI: 10.1177/0022219417704169.

Dyslexia, Reading Comprehension, and Test Response Format

American researchers compared groups of dyslexic and non-dyslexic students levels of reading comprehension. They found no real pattern of difficulty in students with dyslexia having particular problems with one type of testing format (i.e., multiple choice, cloze, etc.). However, they concluded that response format may negatively effect performance in individual dyslexic students.

Collins, A.A. et al. (April 13, 2017). Comparing Students With and Without Reading Difficulties on Reading Comprehension Assessments: A Meta-Analysis. Journal of Attention Disorders. DOI: 10.1177/0022219417704636.

Linguistic Coding Difference/Foreign Language Disability

Researchers from the Midwest found that the diagnosis of Foreign Language Disability should not be given just because a person has Specific Learning Disorder. It should be give after they have attempted a foreign language and failed.

Sparks, R.L et al. (April 5, 2017). How Many U.S. High School Students Have a Foreign Language Reading “Disability”? Reading Without Meaning and the Simple View. Journal of Learning Disabilities. DOI: 10.1177/0022219417704168.

Working Memory and Word-Form Coding

Researches from the University of Washington found that with dyslexia, language disabilities and/or written language disabilities were more likely to have significant difficulties in working memory and word-form coding.

Sanders, E.A. et al. (February 15, 2017). Sequential Prediction of Literacy Achievement for Specific Learning Disabilities Contrasting in Impaired Levels of Language in Grades 4 to 9. Journal of Learning Disabilities. 10.1177/0022219417691048.

Poor Reading and Conduct Disorder

A British scientist found that poor readers have a specific difficulty in verbal working memory. Those with Conduct Disorder and reading problems were found to have significantly more difficulty with working memory than the poor reading group. This was found not to be due to their poor reading.

Kallitsogou, A. et al. (February 1, 2017). Executive Function Variation in Children With Conduct Problems: Influences of Coexisting Reading Difficulties. Journal of Learning Disabilities. DOI: 10.1177/0022219417691834.

Dyslexia and Arithmetic Abilities

French scholars found that 40% of children with dyslexia have difficulties with number sense. However, they found dyslexic children who have number sense difficulties are not different from those with dyscalculia. Hence, their number sense problems were not related to their phonological deficit.

De Clercq-Quaegebeur, M. et al. (January 30, 2017). Arithmetic Abilities in Children With Developmental Dyslexia: Performance on French ZAREKI-R Test. Journal of Learning Disabilities. DOI: 10.1177/0022219417690355.

Number Sense, Conversation and Visual-Spatial Ability

German scientist found children with mathematics disabilities had lower conversational skills and visual-spatial abilities than those with dyslexia and those who were typically developing.

Lambert, K. et al. (January 24, 2017). Conservation Abilities, Visuospatial Skills, and Numerosity Processing Speed: Association With Math Achievement and Math Difficulties in Elementary School Children. Journal of Learning Disabilities. DOI: 10.1177/0022219417690354.

Children, Dyslexia and “Open-Dyslexic” Font

Researchers from the U.S. found that although children with Dyslexia noticed and commented on how the Open-Dyslexic font looked different from typical font no change was found in their reading abilities when they were exposed to it.

Wery, J.J. et al. (March 18, 2016). The effect of a specialized dyslexia font, OpenDyslexic, on reading rate and accuracy. Annals of Dyslexia. DOI: 10.1007/s11881-016-0127-1.

Gender and Autism Symptoms

American scientists surveyed clinicians who worked with autistic children and adolescents about the symptoms they saw in boys and girls with autism. The main difference was found in restrictive/repetitive behaviors, but not in communication behaviors. Girls with autism were found to be most vulnerable during school age and adolescence.

Jamison, R. et al. (April 21, 2017). The clinician perspective on sex differences in autism spectrum disorders. Autism. DOI: 10.1177/1362361316681481.

Joint-Attention in Autistic Adults

Australian scientists found that adults with autism still have significant difficulties with eye-gazing and joint attention. They complain about this, too.

Carunana, N. et al. (April 20, 2017). Joint attention difficulties in autistic adults: An interactive eye-tracking study. Autism. DOI: 10.1177/1362361316676204.

Decision Making and Autism

British scholars interviewed adults with autism and found they have a strong tendency to experience difficulty with decision making. The scholars then evaluated their decision making skills and found they were significantly slower in making decisions than the general population, but they used more care and logical methods to arrive at a decision. The scientists recommended giving those with autism support while they make decisions.

Vella, L. et al. (April 20, 2017). Understanding self-reported difficulties in decision-making by people with autism spectrum disorders. Autism. DOI: [10.1177/1362361316687988](https://doi.org/10.1177/1362361316687988).

Transition To Work and Autism

Scientists from Australia found that those with autism find the transition to the world of work easier if they were given help with organization, environmental accommodations, and job coaching. They did worse with in learning specific jobs tasks, dealing with their anxiety, being distractible, and being too direct socially.

Hedley, D. et al. (April 7, 2017). Transition to work: Perspectives from the autism spectrum. Autism. DOI: 10.1177/1362361316687697.

Autism and Driving

Researchers from Pennsylvania discovered most adolescents with autism eventually get their drivers license on average 2 years after they get their learners permit and it take typically developing teen about 9 months. Approximately 83% of the typically developing teens had their license in 9 months and about 1/3rd of those with autism did.

Curry, A.E. et al. (April 4, 2017). Longitudinal study of driver licensing rates among adolescents and young adults with autism spectrum disorder. Autism. DOI: 10.1177/1362361317699586.

Obesity and Autism

American scientists found that 5 to 9 year olds with Autism are significantly more at risk of being obese and overweight than their typically developing peers. Obesity was found to indicate lowers skills of everyday living in those with autism.

Criado, KK. et al. (March 22, 2017). Overweight and obese status in children with autism spectrum disorder and disruptive behavior. Autism. DOI: 10.1177/1362361316683888.

Prison and Autism

Norwegian investigators interviewed 9 adult prisoners with autism. They appeared for the most part to adapt to prison life due to the ridged rules of the environment. Their crimes tended to be related to misunderstandings, idiosyncratic beliefs and behaviors, and being overwhelmed by stress.

Helverschou, S.B. et al. (March 22, 2017). Personal experiences of the Criminal Justice System by individuals with autism spectrum disorders. Autism. DOI: 10.1177/1362361316685554.

Autism and Executive Function Training

Researchers from the Netherlands found that children with milder forms of autism can benefit from executive function training if they respond to reward.

De Vries, M. et al. (March 19, 2017). Exploring possible predictors and moderators of an executive function training for children with an autism spectrum disorder. Autism. DOI: 10.1177/1362361316682622.

Autism and Facial Expression

British researchers discovered that children and adolescents with autism have a global deficit in facial expression recognition not just in subtle facial expression when compared to their typically developing peers.

Griffiths, S. et al. (March 31, 2017). Impaired Recognition of Basic Emotions from Facial Expressions in Young People with Autism Spectrum Disorder: Assessing the Importance of Expression Intensity. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-017-3091-7.

Autism, Williams Syndrome, and Joint Attention

Scientists compared the joint social attention of a group of children with autism with a group of children with William Syndrome. Both groups had similar deficits in spontaneous joint attention. However, those with autism tended not to follow the referential gaze of others and to respond to social cues.

Fanning, P.A.J. et al. (March 27, 2017). Social Attention, Joint Attention and Sustained Attention in Autism Spectrum Disorder and Williams Syndrome: Convergences and Divergences. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-017-3106-4.

Autism and Sexual Preference

Australian researchers received self-reported data on past sexual interactions and sexual attraction of adolescent males and females with and without autism. They found that females with autism reported lower rates of heterosexuality, Higher rates of bisexuality and in uncertainty of attraction than typically developing teens. Boys with autism had significantly fewer girlfriends/boyfriends.

May, T. et al. (March 24, 2017). Brief Report: Sexual Attraction and Relationships in Adolescents with Autism. Journal of Autism and Developmental Disorders. DOI: 10.1007/s10803-017-3092-6.

Autism and Driving

British researchers found that those with autism have significant difficulty predicting when a moving object will arrive at certain places. This could explain in part problems they have with driving.

Sheppard, E. et al. (May 4, 2016). Difficulties predicting time-to-arrival in individuals with autism spectrum disorders. Research in Autism Spectrum Disorders. DOI: [10.1016/j.rasd.2016.05.001](https://doi.org/10.1016/j.rasd.2016.05.001).

Facial Expression and Autism

Researchers from Canada found that adults with autism have significant difficulty discerning what facial expressions convey in social situations. They make fewer facial eye fixations than typical adults. The more impaired the adult with autism was and the less empathy they had the more trouble they had.

Rigby, S.N. et al. (May, 2016). Gaze patterns during scene processing in typical adults and adults with autism spectrum disorders. Research in Autism Spectrum Disorder. DOI: [10.1016/j.rasd.2016.01.012](https://doi.org/10.1016/j.rasd.2016.01.012).

Miscellaneous



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Music Anhedonia

Canadian and Spanish scientists discovered by using fMRI imagery there are people who experience significantly less pleasure from music than the general population. They have significantly less activation of the nucleus accumbens when exposed to music than the general population. They also have less between the right cortical cortex and the nucleus accumbens; However; they did not show similar responses to other rewarding stimuli in their nucleus accumbens. There were others who had stronger reactions in their nucleus accumbens and more connectivity between their nucleus accumbens and right cortical area than the general population. They found music more rewarding than the general population.

Martínez-Molina, N. et al. (November 15, 2016). Neural correlates of specific musical anhedonia. PNAS, 113(46), E7337–E7345.