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Autism Behavior Inventory: A Novel Tool for Assessing Core and Associated Symptoms of Autism Spectrum Disorder.

Author(s): Bangerter, Abi; Ness, Seth; Aman, Michael G; Esbensen, Anna J; Goodwin, Matthew S; Dawson, Geraldine; Hendren, Robert; Leventhal, Bennett; Khan, Anzalee; Opler, Mark; Harris, Adrianne; Pandina, Gahan

Source: Journal of child and adolescent psychopharmacology; May 2017

Abstract: OBJECTIVE Autism Behavior Inventory (ABI) is a new measure for assessing changes in core and associated symptoms of autism spectrum disorder (ASD) in participants (ages: 3 years-adulthood) diagnosed with ASD. It is a web-based tool with five domains (two ASD core domains: social communication, restrictive and repetitive behaviors; three associated domains: mental health, self-regulation, and challenging behavior). This study describes design, development, and initial psychometric properties of the ABI.METHODS ABI items were generated following review of existing measures and inputs from expert clinicians. Initial ABI scale contained 161 items that were reduced to fit a factor analytic model, retaining items of adequate reliability. Two versions of the scale, ABI-full (ABI-F; 93 items) and ABI-short version (ABI-S; 36 items), were developed and evaluated for psychometric properties, including validity comparisons with commonly used measures. Both scales were administered to parents and healthcare professionals (HCPs) involved with study participants. RESULTS Test-retest reliability (intraclass correlation coefficient [ICC] = 0.79) for parent ratings on ABI was robust and compared favorably to existing scales. Test-retest correlations for HCP ratings were generally lower versus parent ratings. ABI core domains and comparison measures strongly correlated (r ≥ 0.70), demonstrating good concurrent validity. CONCLUSIONS Overall, ABI demonstrates promise as a tool for measuring change in core symptoms of autism in ASD clinical studies, with further validation required.

Database: Medline

The effectiveness of an outdoor adventure programme for young children with autism spectrum disorder: a controlled study.

Author(s): Zachor, Ditza A; Vardi, Shira; Baron-Eitan, Shani; Brodai-Meir, Inbal; Ginossar, Noa; Ben-Litzchak, Esther

Source: Developmental medicine and child neurology; May 2017; vol. 59 (no. 5); p. 550-556

Abstract: AIM Outdoor adventure programmes aim to improve interpersonal relationships using adventurous activities. The current study examined the effectiveness of an outdoor adventure programme in children with autism spectrum disorders (ASD).METHOD The study included 51 participants (40 males, 11 females; age 3y 4mo-7y 4mo) enrolled in ASD special education kindergartens. Only the intervention group (n=30) participated in the outdoor adventure programme for 13 weeks, completing challenging physical activities that required cooperation and communication with peers and instructors. The control group (n=21) was not significantly different from the research group in age, sex, cognitive, and adaptive
RESULTS Outcomes after the intervention revealed significant improvement in social-communication and different directions in the two groups in the social cognition, social motivation, and autistic mannerisms subdomains of the Social Responsiveness Scale. While the group that received an outdoor adventure programme showed a tendency toward a reduction in severity, the control group showed the opposite (p<0.010). INTERPRETATION The outdoor adventure programme required problem-solving skills and forced the child to communicate in exciting situations. This study suggests that an outdoor adventure programme may be an effective intervention in addition to traditional treatments in young children with ASD. Future studies should examine the outcome of outdoor adventure programmes delivered for longer periods of time and maintenance of the achievements over time.

Database: Medline

STUDY SHOWS SHORT-DURATION, LOW- TO MODERATE-INTENSITY EXERCISE IMPROVES STEREOTYPICAL BEHAVIOR IN CHILDREN WITH AUTISM.

Source: ACSM's Health & Fitness Journal; May 2017; vol. 21 (no. 3); p. 2-2

Abstract: The article offers information on an study published in Medicine and Science in Sports and Exercise, according to which low to moderate intensity exercise can improves stereotypical behavior in children with autism.

Database: CINAHL

Characteristics of Students Receiving Occupational Therapy Services in Transition and Factors Related to Postsecondary Success.

Author(s): Eismann, Maria M.; Weisshaar, Rebecca; Capretta, Cristina; Cleary, Dennis S.; Kirby, Anne V.; Persch, Andrew C.

Source: American Journal of Occupational Therapy; May 2017; vol. 71 (no. 3); p. 1-9

Available in full text at American Journal of Occupational Therapy, The - from ProQuest

Abstract: OBJECTIVE. This study had a twofold purpose: (1) identify the characteristics of people with disabilities who received occupational therapy services during their transition to adulthood and (2) determine factors associated with their successful postsecondary transition. METHOD. This study was a secondary analysis of National Longitudinal Study-2 data. Data analyses include descriptive statistics, binary logistic regression, and simple linear regression. RESULTS. Autism, cerebral palsy, and intellectual disability were the most commonly reported disability classifications. Participation in postsecondary education was significantly associated with functional use of arms and hands. Postsecondary employment was significantly associated with verbal comprehension. Participation in community activities was significantly related to students' health status, and participation in community service was significantly related to students' functional use of arms and hands. CONCLUSION. Providing transition services to students with disabilities remains an emerging area of practice. Occupational therapy practitioners may contribute to transition teams by intervening to improve functional abilities and health status.

Database: CINAHL

Detection and Treatment of Autism Spectrum Disorder by Occupational Therapy Practitioners: Addressing Racial Disparity in Diagnosis.

Author(s): Gibbs, Varleisha D.

Source: American Journal of Occupational Therapy; May 2017; vol. 71 (no. 3); p. 1-4

Available in full text at American Journal of Occupational Therapy, The - from ProQuest

Abstract: As the prevalence of autism spectrum disorder (ASD) continues to rise, racial disparities remain in age of diagnosis and initiation of treatment. Therefore, occupational therapy practitioners should examine cultural perceptions related to disparities in ASD diagnosis. This article investigates the role that practitioners may play in this disparity by asking, "Are occupational therapy practitioners contributing to the late diagnosis of children with ASD who are members of particular racial or ethnic groups?" Correlations among practitioners' detection of symptoms, parents' perceptions, and evaluator influences are investigated. By examining these factors, practitioners may gain better insight into these disparities and therefore provide more effective advocacy regarding early diagnosis and treatment access.

Database: CINAHL

Injury Mortality in Individuals With Autism.

Author(s): Guan, Joseph; Guohua Li

Source: American Journal of Public Health; May 2017; vol. 107 (no. 5); p. 791-793
Abstract: Objectives. To examine epidemiological patterns of injury fatalities in individuals with a diagnosis of autism. Methods. We identified individuals with a diagnosis of autism who died between 1999 and 2014 by screening causes of death in the multiple cause-of-death data files in the National Vital Statistics System based on the International Classification of Diseases, 10th Revision, code F84.0. We used the general US population as the reference to calculate proportionate mortality ratios (PMRs) and 95% confidence intervals (CIs). Results. During the study period, 1367 deaths (1043 males and 324 females) in individuals with autism were recorded in the United States. The mean age at death for individuals with autism was 36.2 years (SD = 20.9 years), compared with 72.0 years (SD = 19.2 years) for the general population. Of the deaths in individuals with autism, 381 (27.9%) were attributed to injury (PMR = 2.93; 95% CI = 2.64, 3.24), with suffocation (n = 90; PMR = 31.93; 95% CI = 25.69, 39.24) being the leading cause of injury mortality, followed by asphyxiation (n = 78; PMR = 13.50; 95% CI = 10.68, 16.85) and drowning (n = 74; PMR = 39.89; 95% CI = 31.34, 50.06). Conclusions. Individuals with autism appear to be at substantially heightened risk for death from injury.

Database: CINAHL

How does autism spectrum disorder affect the risk and severity of childhood asthma?

Author(s): Jónsdóttir, Urður; Lang, Jason E.

Source: Annals of Allergy, Asthma & Immunology; May 2017; vol. 118 (no. 5); p. 570-576

Abstract: Background: Autism spectrum disorder (ASD) and asthma are among the most common chronic disorders in childhood. Both are associated with altered immune regulation and share several risk factors. The effects of ASD on risk for later asthma and asthma severity remain unclear. Objective: To determine whether ASD in children increases the risk of incident asthma and worsens asthma severity. Methods: We performed 2 distinct analytic designs (case-control and retrospective longitudinal cohort) using a multistate electronic health records database to assess the odds of new asthma and asthma severity among children with ASD. In both designs, children with ASD were matched with children without ASD according to sex, age, race, ethnicity, location, and insurance status. Pulmonary function, controller medication prescriptions, asthma exacerbations, and asthma-related hospitalizations were collected. The effects of ASD on asthma risk and severity were assessed using multivariable linear and logistic regression. Results: Among children with asthma, ASD was associated with reduced exacerbations (odds ratio [OR], 0.71; 95% confidence interval [CI], 0.54-0.92), better forced expiratory volume in 1 second/forced vital capacity ratio (0.876 vs 0.841, P < .001), and lower odds of airflow obstruction (OR, 0.53; 95% CI, 0.31-0.90) but had higher odds of asthma controller prescription (OR, 2.18; 95% CI, 1.62-2.93). In a longitudinal analysis of children without asthma, ASD was found to be protective for new asthma (OR, 0.44; 95% CI, 0.26-0.74). Conclusion: Among children with asthma, concomitant ASD is associated with better asthma-related outcomes but a higher controller treatment burden. In addition, our data did not support ASD as a risk factor for incident asthma.

Database: CINAHL

FDA Shuts Down Manufacturer of Autism 'Drugs'.

Source: ASHA Leader; May 2017 ; p. 8-8

Abstract: The article reports on the decision by the U.S. Food and Drug Administration (FDA) to shutdown operations of drugs and dietary supplements manufacturer Pick and Pay Inc./Cili Minerals in 2017 for falsely marketing products.

Database: CINAHL

Infant Brain Changes Could Be Autism Predictor, Small Study Says.

Source: ASHA Leader; May 2017 ; p. 13-13

Abstract: The article discusses research being done on the use of infant brain changes in predicting autism spectrum disorder (ASD), which references a study by Joseph Piven et al. published in the journal "Nature."

Database: CINAHL

Use of complementary and alternative medicine in children and adolescents with autism spectrum disorder: A systematic review.

Author(s): Höfer, Juliana; Hoffmann, Falk; Bachmann, Christian

Source: Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 387-402

Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details
Abstract: Despite limited evidence, complementary and alternative medicine treatments are popular in autism spectrum disorder. The aim of this review was to summarize the available evidence on complementary and alternative medicine use frequency in autism spectrum disorder. A systematic search of three electronic databases was performed. All research studies in English or German reporting data on the frequency of complementary and alternative medicine use in individuals with autism spectrum disorder were included. Two independent reviewers searched the literature, extracted information on study design and results, and assessed study quality using an established quality assessment tool. Twenty studies with a total of 9540 participants were included. The prevalence of any complementary and alternative medicine use ranged from 28% to 95% (median: 54%). Special diets or dietary supplements (including vitamins) were the most frequent complementary and alternative medicine treatments, ranking first in 75% of studies. There was some evidence for a higher prevalence of complementary and alternative medicine use in autism spectrum disorder compared to other psychiatric disorders and the general population. Approximately half of children and adolescents with autism spectrum disorder use complementary and alternative medicine. Doctors should be aware of this and should discuss complementary and alternative medicine use with patients and their carers, especially as the evidence is mixed and some complementary and alternative medicine treatments are potentially harmful.

Database: CINAHL

Social analogical reasoning in school-aged children with autism spectrum disorder and typically developing peers.

Author(s): Green, Adam E; Kenworthy, Lauren; Gallagher, Natalie M; Antezana, Ligia; Mosner, Maya G; Krieg, Samantha; Dudley, Katherina; Ratto, Allison; Yerys, Benjamin E

Source: Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 403-411

Abstract: Analogical reasoning is an important mechanism for social cognition in typically developing children, and recent evidence suggests that some forms of analogical reasoning may be preserved in autism spectrum disorder. An unanswered question is whether children with autism spectrum disorder can apply analogical reasoning to social information. In all, 92 children with autism spectrum disorder completed a social content analogical reasoning task presented via photographs of real-world social interactions. Autism spectrum disorder participants exhibited performance that was well above chance and was not significantly worse than age-matched intelligence quotient-matched typically developing children. Investigating the relationship of social content analogical reasoning performance to age in this cross-sectional dataset indicated similar developmental trajectories in the autism spectrum disorder and typically developing children groups. These findings provide new support for intact analogical reasoning in autism spectrum disorder and have theoretical implications for analogy as a metacognitive skill that may be at least partially dissociable from general deficits in processing social content. As an initial study of social analogical reasoning in children with autism spectrum disorder, this study focused on a basic research question with limited ecological validity. Evidence that children with autism spectrum disorder can apply analogical reasoning ability to social content may have long-range applied implications for exploring how this capacity might be channeled to improve social cognition in daily life.

Database: CINAHL


Author(s): Maddox, Brenna B; Trubanova, Andrea; White, Susan W

Source: Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 412-422

Abstract: Recent studies have examined non-suicidal self-injury in community and clinical samples, but there is no published research on non-suicidal self-injury in individuals with autism spectrum disorder. This lack of research is surprising, since individuals with autism spectrum disorder have high rates of risk factors for non-suicidal self-injury, including depression and poor emotion regulation skills. Using an online survey, we examined non-suicidal self-injury methods, frequency, severity, functions, and initial motivations in
adults with autism spectrum disorder (n = 42). We also compared their non-suicidal self-injury characteristics to those of a gender-matched group of adults without autism spectrum disorder (n = 42). Of the participants with autism spectrum disorder, 50% reported a history of non-suicidal self-injury. This proportion is higher than non-suicidal self-injury rates previously reported for college students, adult community samples, and adolescents with autism spectrum disorder, which suggests that adults with autism spectrum disorder have increased risk for engaging in non-suicidal self-injury. Women with autism spectrum disorder were significantly more likely to endorse non-suicidal self-injury, relative to men with autism spectrum disorder. A history of non-suicidal self-injury was not related to current depression or emotion dysregulation for the participants with autism spectrum disorder. Non-suicidal self-injury characteristics among the adults with autism spectrum disorder were similar to nonsuicidal self-injury in adults without autism spectrum disorder. These preliminary findings highlight the need for increased awareness and further research about non-suicidal self-injury within autism spectrum disorder.

Database: CINAHL

Trajectories and correlates of special education supports for youth with autism spectrum disorder and psychiatric comparisons.

Author(s): Spaulding, Christine J; Lerner, Matthew D; Gadow, Kenneth D

Source: Autism; The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 423-435
Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details
Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

Abstract: Relatively little is known about patterns of school-based supportive services for youth with autism spectrum disorder. This study describes these supportive services and their correlates, both cross-sectionally and retrospectively, in a large sample (N = 283) of 6to 18-year-old youth. To assess whether special education designation and classroom placement patterns were peculiar to autism spectrum disorder, we also conducted analyses comparing youth with autism spectrum disorder to those with other psychiatric diagnoses (N = 1088). In higher grades, the relative quantity of three common supportive services received by youth with autism spectrum disorder decreased, while total supportive service quantity remained stable over time. Youth with autism spectrum disorder were more likely to receive a special education designation and were placed in less inclusive classroom settings than youth with other psychiatric diagnoses. These findings suggest that as youth with autism spectrum disorder reach higher grades, changes in service provision occur in terms of both time and quantity.

Database: CINAHL

Understanding parents' and professionals' knowledge and awareness of autism in Nepal.

Author(s): Heys, Michelle; Alexander, Amy; Medeiros, Emilie; Tumbahangpae, Kirti M; Gibbons, Felicity; Shrestha, Rita; Manandhar, Mangala; Wickenden, Mary; Shrestha, Merina; Costello, Anthony; Manandhar, Dharma; Pellicano, Elizabeth

Source: Autism; The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 436-449
Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details
Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

Abstract: Autism is a global phenomenon. Yet, there is a dearth of knowledge of how it is understood and its impact in low-income countries. We examined parents' and professionals' understanding of autism in one low-income country, Nepal. We conducted focus groups and semi-structured interviews with parents of autistic and non-autistic children and education and health professionals from urban and rural settings (n = 106), asking questions about typical and atypical development and presenting vignettes of children to prompt discussion. Overall, parents of typically developing children and professionals had little explicit awareness of autism. They did, however, use some distinctive terms to describe children with autism from children with other developmental conditions. Furthermore, most participants felt that environmental factors, including in-utero stressors and birth complications, parenting style and home or school environment were key causes of atypical child development and further called for greater efforts to raise awareness and build community capacity to address autism. This is the first study to show the striking lack of awareness of autism by parents and professionals alike. These results have important implications for future work in Nepal aiming both to estimate the prevalence of autism and to enhance support available for autistic children and their families.

Database: CINAHL
Not knowing what I feel: Emotional empathy in autism spectrum disorders.

**Author(s):** Trimmer, Emily; McDonald, Skye; Rushby, Jacqueline Ann

**Source:** Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 450-457

Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details

Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

**Abstract:** While there is a general consensus in the literature that individuals with autism spectrum disorder have difficulty with cognitive empathy, much less is known about emotional empathy processing in these individuals. Most research has employed subjective self-report measures, which can often be misinterpreted or under-reported/over-reported. More objective measures such as psychophysiological recordings of arousal offer a more objective response. Furthermore, combining physiological responses with self-report ratings allows us to explore the relationship between these two responses to emotionally charged stimuli. A total of 25 individuals with autism spectrum disorder were compared with 25 matched controls on their physiological (arousal) and psychological (self-report) responses to emotionally distressing video scenes. These responses were also then compared with self-report cognitive and emotional trait empathy. Results indicate that while individuals with autism spectrum disorder appear to respond similarly to controls physiologically, their interpretation of this response is dampened emotionally. Furthermore, this dampening of self-report emotional response is associated with a general reduction in trait empathy.

**Database:** CINAHL

Asperger syndrome in males over two decades: Quality of life in relation to diagnostic stability and psychiatric comorbidity.

**Author(s):** Helles, Adam; Gillberg, I Carina; Gillberg, Christopher; Billstedt, Eva

**Source:** Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 458-469

Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details

Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

**Abstract:** This study examined objective quality of life (work, academic success, living situation, relationships, support system) and subjective quality of life (Sense of Coherence and Short-Form Health Survey-36) in an adult sample of males (n = 50, mean age: 30 years) with Asperger syndrome diagnosed in childhood and followed prospectively over two decades. The association between long-term diagnostic stability of an autism spectrum disorder and/or comorbid psychiatric disorders with quality of life was also examined. The results showed great variability as regards quality of life. The subsample that no longer fulfilled an autism spectrum disorder had full-time jobs or studies (10/11), independent living (100%), and reported having two or more friends (100%). In the stable autism spectrum disorder group, 41% had full-time job or studies, 51% lived independently, and 33% reported two or more friends, and a significant minority had specialized employments, lived with support from the government, or had no friends. Academic success was positively correlated with IQ. A majority of the total group scored average Sense of Coherence scores, and the mean for Short-Form Health Survey-36 was above average regarding psychical health and below average regarding mental health. Stability of autism spectrum disorder diagnosis was associated with objective but not subjective quality of life, while psychiatric comorbidity was associated with subjective but not objective quality of life.

**Database:** CINAHL

Autism spectrum disorder reporting in lower socioeconomic neighborhoods.

**Author(s):** Dickerson, Aisha S; Rahbar, Mohammad H; Pearson, Deborah A; Kirby, Russell S; Bakian, Amanda V; Bilder, Deborah A; Harrington, Rebecca A; Pettygrove, Sydney; Zahorodny, Walter M; Moyé III, Lemuel A; Durkin, Maureen; Wingate, Martha Slay

**Source:** Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 470-480

Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details

Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

**Abstract:** Utilizing surveillance data from five sites participating in the Autism and Developmental Disabilities Monitoring Network, we investigated contributions of surveillance subject and census tract population sociodemographic characteristics on variation in autism spectrum disorder ascertainment and prevalence estimates from 2000 to 2008 using ordinal hierarchical models for 2489 tracts. Multivariable
analyses showed a significant increase in ascertainment of autism spectrum disorder cases through both school and health sources, the optimal ascertainment scenario, for cases with college-educated mothers (adjusted odds ratio = 1.06, 95% confidence interval = 1.02-1.09). Results from our examination of sociodemographic factors of tract populations from which cases were drawn also showed that after controlling for other covariates, statistical significance remained for associations between optimal ascertainment and percentage of Hispanic residents (adjusted odds ratio = 0.93, 95% confidence interval = 0.88-0.99) and percentage of residents with at least a bachelor's degree (adjusted odds ratio = 1.06, 95% confidence interval = 1.01 -- 1.11). We identified sociodemographic factors associated with autism spectrum disorder prevalence estimates including race, ethnicity, education, and income. Determining which specific factors influence disparities is complicated; however, it appears that even in the presence of education, racial and ethnic disparities are still apparent. These results suggest disparities in access to autism spectrum disorder assessments and special education for autism spectrum disorder among ethnic groups may impact subsequent surveillance.

Database: CINAHL

The effects of an early motor skill intervention on motor skills, levels of physical activity, and socialization in young children with autism spectrum disorder: A pilot study.

Author(s): Ketcheson, Leah; Hauck, Janet; Ulrich, Dale

Source: Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 481-492

Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details
Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

Abstract: Despite evidence suggesting one of the earliest indicators of an eventual autism spectrum disorder diagnoses is an early motor delay, there remain very few interventions targeting motor behavior as the primary outcome for young children with autism spectrum disorder. The aim of this pilot study was to measure the efficacy of an intensive motor skill intervention on motor skills (Test of Gross Motor Development-2), physical activity (accelerometers), and socialization (Playground Observation of Peer Engagement) in young children with autism spectrum disorder. A total of 20 children with autism spectrum disorder aged 4-6 years participated. The experimental group (n = 11) participated in an 8-week intervention consisting of motor skill instruction for 4 h/day, 5 days/week. The control group (n = 9) did not receive the intervention. A repeated-measures analysis of covariance revealed statistically significant differences between groups in all three motor outcomes, locomotor (F(1, 14) = 10.07, p < 0.001, partial n2 = 0.42), object control (F(1, 14) = 12.90, p < 0.001, partial n2 = 0.48), and gross quotient (F(1, 14) = 15.61, p < 0.01, partial n2 = 0.53). Findings shed light on the importance of including motor programming as part of the early intervention services delivered to young children with autism spectrum disorder.

Database: CINAHL

The developmental trajectory of parent-report and objective sleep profiles in autism spectrum disorder: Associations with anxiety and bedtime routines.

Author(s): Fletcher, Fay E; Foster-Owens, Mistral D; Conduit, Russell; Rinehart, Nicole J; Riby, Deborah M; Cornish, Kim M

Source: Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 493-503

Available in full text at Autism - from SAGE ; Notes: Sign in with OpenAthens details
Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings ; Notes: Athens password required

Abstract: The present study compared the course of parent-report and actigraphy-derived sleep profiles over a 1-year period, in school-age children with autism spectrum disorder and typically developing children. The Children's Sleep Habits Questionnaire and 14 nights of actigraphy were used to assess sleep profiles. Parents also completed the Spence Children's Anxiety Scale, the Social Worries Questionnaire and the Bedtime Routines Questionnaire. Between-group differences in parent-reported sleep problems were less pronounced at follow-up compared to baseline. The course of objective sleep was comparable between groups, with a significant reduction in sleep duration over time in both groups. Children with autism spectrum disorder were further characterised by significantly more night-to-night variability in sleep quality, across both time points. Reductions over time in parent-reported sleep problems were significantly associated with reduced anxiety. Reductions in actigraphy-derived sleep efficiency were associated with an increased frequency of maladaptive activities in the hour before bedtime, in both children with and without autism spectrum disorder.
**Database:** CINAHL

**The relationship between autism symptoms and arousal level in toddlers with autism spectrum disorder, as measured by electrodermal activity.**

**Author(s):** Prince, Emily Barbara; Kim, Elizabeth S; Wall, Carla Anne; Gisin, Eugenia; Goodwin, Matthew S; Simmons, Elizabeth Schoen; Chawarska, Kaisa; Shic, Frederick

**Source:** Autism: The International Journal of Research & Practice; May 2017; vol. 21 (no. 4); p. 504-508

Available in full text at Autism - from SAGE; Notes: Sign in with OpenAthens details

Available in full text at Autism - from Coventry & Warwickshire Partnership Trust Libraries Print holdings; Notes: Athens password required

**Abstract:** Electrodermal activity was examined as a measure of physiological arousal within a naturalistic play context in 2-year-old toddlers (N = 27) with and without autism spectrum disorder. Toddlers with autism spectrum disorder were found to have greater increases in skin conductance level than their typical peers in response to administered play activities. In the autism spectrum disorder group, a positive relationship was observed between restrictive and repetitive behaviors and skin conductance level increases in response to mechanical toys, whereas the opposite pattern was observed for passive toys. This preliminary study is the first to examine electrodermal activity levels in toddlers with autism spectrum disorder during play-based, naturalistic settings, and it highlights the potential for electrodermal activity as a measure of individual variability within autism spectrum disorder and early development.

**Database:** CINAHL

**A Practitioner Model for Increasing Eye Contact in Children With Autism.**

**Author(s):** Cook, Jennifer L.; Rapp, John T.; Mann, Kathryn R.; McHugh, Catherine; Burji, Carla; Nuta, Raluca

**Source:** Behavior Modification; May 2017; vol. 41 (no. 3); p. 382-404

**Abstract:** Although many teaching techniques for children with autism spectrum disorder (ASD) require the instructor to gain the child’s eye contact prior to delivering an instructional demand, the literature contains notably few procedures that reliably produce this outcome. To address this problem, we evaluated the effects of a sequential model for increasing eye contact in children with ASD. The model included the following phases: contingent praise only (for eye contact), contingent edibles plus praise, stimulus prompts plus contingent edibles and praise, contingent video and praise, schedule thinning, and maintenance evaluations for up to 2 years. Results indicated that the procedures increased eye contact for 20 participants (one additional participant did not require consequences). For 16 participants, praise (alone) was not sufficient to support eye contact; however, high levels of eye contact were typically maintained with these participants when therapists used combined schedules of intermittent edibles or video and continuous praise. We discuss some limitations of this model and directions for future research on increasing eye contact for children with ASD.

**Database:** CINAHL

**Keep your eye on...**

**Author(s):** Knopf, Alison

**Source:** Brown University Child & Adolescent Behavior Letter; May 2017; vol. 33 (no. 5); p. 2-2

**Abstract:** The link between irritability and depression in ADHD with DMDD, The effects of parent communication intervention with infants on preventing autism

**Database:** CINAHL

**Autism spectrum disorder and other neurobehavioural comorbidities in rare disorders of the Ras/MAPK pathway.**

**Author(s):** Garg, Shruti; Brooks, Ami; Burns, Amy; Burkitt-Wright, Emma; Kerr, Bronwyn; Huson, Susan; Emsley, Richard; Green, Jonathan

**Source:** Developmental Medicine & Child Neurology; May 2017; vol. 59 (no. 5); p. 544-549

**Abstract:** Aim: To investigate the cognitive and behavioural phenotype in rare disorders of the Ras/MAPK pathway, namely Noonan, cardiofaciocutaneous (CFC), and Costello syndromes, particularly prevalence of autism spectrum disorder (ASD) and attention-deficit-hyperactivity disorder (ADHD). Method: Fifty children were recruited over 10 months through the regional genetics service and advertisements. A range of parent, child, and observational measures were administered including Autism Diagnostic Interview-Revised and Autism Diagnostic Observation Scale. Results: Using the Collaborative Programme for
Excellence in Autism criteria, 12 out of 40 children with Noonan syndrome (30%) showed ASD, and 12 out of 40 (30%) with partial ASD features and 16 out of 40 (40%) showed non-ASD. The Noonan syndrome ASD group showed male dominance in a ratio of 5:1. In the CFC group, eight out of nine children met the criteria for ASD, with equal sex distribution. Additionally 19 out of 40 (48%) of the Noonan syndrome group and eight out of nine (88.9%) of the CFC group scored met clinical criteria for ADHD. Only one child was in the Costello syndrome group.

Interpretation: This is the first systematic study to suggest a high prevalence of ASD in Noonan and CFC syndromes, and thus offers crucial evidence to support the importance of the Ras/MAPK pathway in the aetiology of ASD. Limitations include the inevitable possibility of a sampling bias in a rare disorder study of this kind.

Database: CINAHL

The effectiveness of an outdoor adventure programme for young children with autism spectrum disorder: a controlled study.

Author(s): Zachor, Ditza A; Vardi, Shira; Baron-Eitan, Shani; Brodal-Meir, Inbal; Ginossar, Noa; Ben-Litzchak, Esther

Source: Developmental Medicine & Child Neurology; May 2017; vol. 59 (no. 5); p. 550-556

Abstract: Aim: Outdoor adventure programmes aim to improve interpersonal relationships using adventurous activities. The current study examined the effectiveness of an outdoor adventure programme in children with autism spectrum disorders (ASD). Method: The study included 51 participants (40 males, 11 females; age 3y 4mo-7y 4mo) enrolled in ASD special education kindergartens. Only the intervention group (n=30) participated in the outdoor adventure programme for 13 weeks, completing challenging physical activities that required cooperation and communication with peers and instructors. The control group (n=21) was not significantly different from the research group in age, sex, cognitive, and adaptive behaviour measures. Results: Outcomes after the intervention revealed significant improvement in social communication and different directions in the two groups in the social cognition, social motivation, and autistic mannerisms subdomains of the Social Responsiveness Scale. While the group that received an outdoor adventure programme showed a tendency toward a reduction in severity, the control group showed the opposite (p<0.010). Interpretation: The outdoor adventure programme required problem-solving skills and forced the child to communicate in exciting situations. This study suggests that an outdoor adventure programme may be an effective intervention in addition to traditional treatments in young children with ASD. Future studies should examine the outcome of outdoor adventure programmes delivered for longer periods of time and maintenance of the achievements over time.

Database: CINAHL

Online Positive Thinking Training Intervention for Caregivers of Individuals with ASD: Necessity, Acceptability and Feasibility.

Author(s): Bekhet, Abir K.

Source: Issues in Mental Health Nursing; May 2017; vol. 38 (no. 5); p. 443-448

Abstract: Background: More than 3.5 million people in the United States are diagnosed with autism spectrum disorder (ASD). Caring for children with ASD can be stressful and can be detrimental to the well-being of the caregivers (CGs). However, the adverse effects of caregiving on the well-being of CGs may be avoided with appropriate interventions. CGs of persons with ASD might benefit from a positive thinking training (PTT) intervention to help them cope with the stress of caregiving. However, the necessity, acceptability and feasibility for PTT in ASD CGs have not been studied. Objective: To examine the necessity, acceptability and feasibility of a six-week online PTT intervention designed to improve the well-being of the CGs. Design: Random assignment of ASD CGs to one of two conditions: (1) PTT online intervention or (2) Control group. Results: The mean score on the depressive cognition scale (DCS) was 20, indicating a high need of PTT to all enrolled CGs. High depressive cognitions in ASD CGs were associated with lower positive thinking (r= -.39; p<.001). Regarding acceptability, CGs indicated that the different strategies and references to real life were the most interesting parts of the intervention. Regarding feasibility, CGs mentioned that listening to the voice-over PowerPoint and visualization was the easiest part of the PTT. Conclusions: Examination of the fidelity and effectiveness of the PTT are the next steps in the refinement of this intervention.

Database: CINAHL

Developing Autism Screening Criteria for the Brief Infant Toddler Social Emotional Assessment (BITSEA).

Author(s): Giserman Kiss, Ivy; Feldman, Melanie; Sheldrick, R.; Carter, Alice
Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1269-1277

Abstract: There is a critical need for evidence-based, broadband behavioral, and ASD screening measures for use in pediatric and early educational settings to ensure that young children at risk for developing social-emotional disorders and/or ASD are provided with early intervention services to optimize long-term outcomes. The BITSEA is a 42-item screener designed to identify social-emotional/behavioral problems and delays/deficits in social-emotional competence among 11-48-month-olds; 19 items describe behaviors consistent with ASD. Secondary data analysis was employed to develop cut-scores for ASD subscales using Receiver Operating Curves, discriminating children with (n = 223) and without (n = 289) ASD. Cut-scores demonstrated moderate-to-high discriminative power, sensitivity, specificity, and PPV. Findings highlight feasibility of using a broadband social-emotional competence and behavior problem screener to improve early detection of ASD.

Database: CINAHL

Diagnostic Utility of the ADI-R and DSM-5 in the Assessment of Latino Children and Adolescents.

Author(s): Magaña, Sandy; Vanegas, Sandra

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1278-1287

Abstract: Latino children in the US are systematically underdiagnosed with Autism Spectrum Disorder (ASD); therefore, it is important that recent changes to the diagnostic process do not exacerbate this pattern of under-identification. Previous research has found that the Autism Diagnostic Interview-Revised (ADI-R) algorithm, based on the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition, Text Revision (DSM-IV-TR), has limitations with Latino children of Spanish speaking parents. We evaluated whether an ADI-R algorithm based on the new DSM-5 classification for ASD would be more sensitive in identifying Latino children of Spanish speaking parents who have a clinical diagnosis of ASD. Findings suggest that the DSM-5 algorithm shows better sensitivity than the DSM-IV-TR algorithm for Latino children.

Database: CINAHL

Mothers’ and Children’s Story-Telling: A Study of Dyads with Typically Developing Children and Children with ASD.

Author(s): Hutchins, Tiffany; Deraway, Chelsea; Prelock, Patricia; O’Neill, Ana

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1288-1304

Abstract: The production of specific mental state terms types and functions by caregivers and their TD children and caregivers and their children with ASD were assessed in two contexts: a parent’s story-telling task and a child’s story-telling task. Caregivers of children with ASD produced less causal talk and proportionally less desire and cognitive talk than did caregivers of TD children. When focusing only on variation in our ASD sample, caregivers’ and children's production of different mental state references varied with context and were predicted by different child characteristics (i.e., theory of mind, autism severity, language level). We conclude that caregivers are likely adjusting different aspects of mental state input depending on different aspects of child development although these adjustments may not always be optimal.

Database: CINAHL

Effect of Social Stimuli on Postural Responses in Individuals with Autism Spectrum Disorder.

Author(s): Ghanouni, Parisa; Memari, Amir-Hossein; Gharibzadeh, Shahriar; Eghlidi, Jandark; Moshayedi, Pouria

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1305-1313

Abstract: This study was aimed to investigate the effects of social versus non-social stimuli on postural responses in 21 boys with autism spectrum disorder (ASD) (mean age of 11.6 ± 1.5) compared with 30 typically developing (TD) boys (mean age of 11.7 ± 1.8). Postural control of children was examined while they were standing on a force plate and viewing images of an object, male face, or female face in sequence. Each image was shown in two trials and each trial lasted for 20 s. Results indicated a significant interaction between group and task (p < 0.05), meaning that children with ASD but not TD children showed an increased postural sway during face tasks than during object task. Furthermore children with higher autism severity compared to those with lower severity showed an increased change in response to social stimuli (p < 0.01). It seems that the postural control of children with ASD was more affected by the social stimuli than TD children.
Examining the Efficacy of a Family Peer Advocate Model for Black and Hispanic Caregivers of Children with Autism Spectrum Disorder.


**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1314-1322

**Abstract:** Autism spectrum disorder (ASD) affects individuals across all racial and ethnic groups, yet rates of diagnosis are disproportionately higher for Black and Hispanic children. Caregivers of children with ASD experience significant stressors, which have been associated with parental strain, inadequate utilization of mental health services and lower quality of life. The family peer advocate (FPA) model has been utilized across service delivery systems to provide family-to-family support, facilitate engagement, and increase access to care. This study used a randomized controlled design to examine the efficacy of FPAs in a racially and ethnically diverse sample. Results demonstrate significantly increased knowledge of ASD and reduced levels of stress for caregivers who received the FPA intervention as compared to treatment as usual.

A Predictive Coding Account of Psychotic Symptoms in Autism Spectrum Disorder.

**Author(s):** Schalkwyk, Gerrit; Volkmar, Fred; Corlett, Philip

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1323-1340

**Abstract:** The co-occurrence of psychotic and autism spectrum disorder (ASD) symptoms represents an important clinical challenge. Here we consider this problem in the context of a computational psychiatry approach that has been applied to both conditions-predictive coding. Some symptoms of schizophrenia have been explained in terms of a failure of top-down predictions or an enhanced weighting of bottom-up prediction errors. Likewise, autism has been explained in terms of similar perturbations. We suggest that this theoretical overlap may explain overlapping symptomatology. Experimental evidence highlights meaningful distinctions and consistencies between these disorders. We hypothesize that individuals with ASD may experience some degree of delusions without the presence of any additional impairment, but that hallucinations are likely indicative of a distinct process.


**Author(s):** Skorich, Daniel; Gash, Tahlia; Stalker, Katie; Zheng, Lidan; Haslam, S.

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1341-1353

**Abstract:** The social difficulties of autism spectrum disorder (ASD) are typically explained as a disruption in the Shared Attention Mechanism (SAM) sub-component of the theory of mind (ToM) system. In the current paper, we explore the hypothesis that SAM’s capacity to construct the self–other–object relations necessary for shared-attention arises from a self-categorization process, which is weaker among those with more autistic-like traits. We present participants with self-categorization and shared-attention tasks, and measure their autism-spectrum quotient (AQ). Results reveal a negative relationship between AQ and shared-attention, via self-categorization, suggesting a role for self-categorization in the disruption in SAM seen in ASD. Implications for intervention, and for a ToM model in which weak central coherence plays a role are discussed.


**Author(s):** Jeter, Kathryn; Zlomke, Kimberly; Shawler, Paul; Sullivan, Maureen

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1354-1368

**Abstract:** Many assessment measures have only been validated for one specific diagnostic population, which is costly and reduces the clinical utility of assessments. The Eyberg Child Behavior Inventory (ECBI) is one popular measure designed to assess disruptive behavior problems in youth. The ECBI has sound psychometric properties in typically developing youth, but the factor structure has never been examined in children with autism spectrum disorder (ASD). Therefore, the current study conducted a comprehensive psychometric analysis of the ECBI in children with ASD. Retrospective data from a nationally representative
sample was collected from 335 children with ASD ages 2-12 years old. A four factor solution was identified for this sample. Implications of these findings and directions for future research are discussed.

**Database:** CINAHL

**The Role of Theory of Mind on Social Information Processing in Children With Autism Spectrum Disorders: A Mediation Analysis.**

**Author(s):** Mazza, Monica; Mariano, Melania; Peretti, Sara; Masedu, Francesco; Pino, Maria; Valenti, Marco

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1369-1379

**Abstract:** Individuals with autism spectrum disorders (ASD) show significant impairments in social skills and theory of mind (ToM). The aim of this study was to evaluate ToM and social information processing abilities in 52 children with ASD compared to 55 typically developing (TD) children. A mediation analysis evaluated whether social information processing abilities can be mediated by ToM competences. In our results, children with autism showed a deficit in social skills and ToM components. The innovative results of our study applying mediation analysis demonstrate that ToM plays a key role in the development of social abilities, and the lack of ToM competences in children with autism impairs their competent social behavior.

**Database:** CINAHL

**Speech Acts During Friends' and Non-friends' Spontaneous Conversations in Preschool Dyads with High-Functioning Autism Spectrum Disorder versus Typical Development.**

**Author(s):** Bauminger-Zviely, Nirit; Golan-Itshaky, Adi; Tubul-Lavy, Gila

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1380-1390

**Abstract:** In this study, we videotaped two 10-min. free-play interactions and coded speech acts (SAs) in peer talk of 51 preschoolers (21 ASD, 30 typical), interacting with friend versus non-friend partners. Groups were matched for maternal education, IQ (verbal/nonverbal), and CA. We compared SAs by group (ASD/typical), by partner's friendship status (friend/non-friend), and by partner's disability status. Main results yielded a higher amount and diversity of SAs in the typical than the ASD group (mainly in assertive acts, organizational devices, object-dubbing, and pretend-play); yet, those categories, among others, showed better performance with friends versus non-friends. Overall, a more nuanced perception of the pragmatic deficit in ASD should be adopted, highlighting friendship as an important context for children's development of SAs.

**Database:** CINAHL

**Medical Conditions and Demographic, Service and Clinical Factors Associated with Atypical Antipsychotic Medication Use Among Children with An Autism Spectrum Disorder.**

**Author(s):** Lake, Johanna; Denton, Danica; Lunsky, Yona; Shui, Amy; Veenstra-VanderWeele, Jeremy; Anagnostou, Evdokia

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1391-1402

**Abstract:** This study aimed to describe rates of antipsychotic medication use and the association between their use and demographics, clinical variables, and the use of behavioral/education services among children with ASD. For children with ASD ages 2-11 (n = 4749) and those 12-17 (n = 401), 5.4 and 17.7% were prescribed at least one atypical antipsychotic medication respectively. In the multivariable model of young children, older age, use of multiple psychotropic medications, prior ASD diagnosis, non-white Hispanic race/ethnicity, and oppositional defiant problems were associated with antipsychotic use. Among older children, only older age was associated with antipsychotic use. In at least one age group, antipsychotic medication use was also related to behaviour, family and occupational therapy, public insurance, site region, externalizing problems, body mass index, and sleep and gastrointestinal problems.

**Database:** CINAHL

**Potential Risk Factors for the Development of Self-Injurious Behavior among Infants at Risk for Autism Spectrum Disorder.**

**Author(s):** Dimian, Adele; Botteron, Kelly; Dager, Stephen; Elison, Jed; Estes, Annette; Pruett, John; Schultz, Robert; Zwaigenbaum, Lonnie; Piven, Joseph; Wolff, Jason

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1403-1415

**Abstract:** Prevalence of self-injurious behavior (SIB) is as high as 50% among children with autism spectrum disorder (ASD). Identification of risk factors for the development of SIB is critical to early intervention and prevention. However, there is little empirical research utilizing a prospective design to
identify early risk factors for SIB. The purpose of this study was to evaluate behavioral characteristics predicting SIB at age 2 years among 235 infants at high familial risk for ASD. Logistic regression results indicated that presence of SIB or proto-SIB and lower developmental functioning at age 12 months significantly predicted SIB at 24 months. A pattern of persistent SIB over this period was associated with a diagnosis of autism and poorer cognitive and adaptive outcomes.

Database: CINAHL

**Depression in Parents of Children Diagnosed with Autism Spectrum Disorder: A Claims-Based Analysis.**

**Author(s):** Cohrs, Austin; Leslie, Douglas

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1416-1422

**Abstract:** Previous studies showing that Autism Spectrum Disorder (ASD) in children can have secondary effects on the child's parents are limited by small sample sizes and parent self-report. We examined the odds of depression in parents of children with ASD compared to parents of children without ASD using a large national claims database. Mothers (OR 2.95, 95% CI 2.81-3.09) and fathers (OR 2.41, 95% CI 2.25-2.58) of children with ASD were more likely to have a diagnosis of depression than parents of children without ASD. Odds of depression also increased when there was more than one child with ASD in the family and with child age. Study results reinforce the benefits of support and education for parents of children with ASD.

Database: CINAHL

**Electrophysiological Endophenotypes and the Error-Related Negativity (ERN) in Autism Spectrum Disorder: A Family Study.**

**Author(s):** Clawson, Ann; South, Mikle; Baldwin, Scott; Larson, Michael

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1436-1452

**Abstract:** We examined the error-related negativity (ERN) as an endophenotype of ASD by comparing the ERN in families of ASD probands to control families. We hypothesized that ASD probands and families would display reduced-amplitude ERN relative to controls. Participants included 148 individuals within 39 families consisting of a mother, father, sibling, and proband. Robust ANOVAs revealed non-significant differences in ERN amplitude and behavioral performance among ASD probands relative to control youth. In subsequent multiple regression analyses group and kinship (proband, sibling, mother, father) did not significantly predict ΔERN (error minus correct ERN) or behavioral performance. Results do not provide evidence for the ERN as an endophenotype of ASD. Future research is needed to examine state- or trait-related factors influencing ERN amplitudes in ASD.

Database: CINAHL

**'Set in Stone' or 'Ray of Hope': Parents' Beliefs About Cause and Prognosis After Genomic Testing of Children Diagnosed with ASD.**

**Author(s):** Reiff, Marian; Bugos, Eva; Giarelli, Ellen; Bernhardt, Barbara; Spinner, Nancy; Sankar, Pamela; Mulchandani, Surabhi

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1453-1463

**Abstract:** Despite increasing utilization of chromosomal microarray analysis (CMA) for autism spectrum disorders (ASD), limited information exists about how results influence parents' beliefs about etiology and prognosis. We conducted in-depth interviews and surveys with 57 parents of children with ASD who received CMA results categorized as pathogenic, negative or variant of uncertain significance. Parents tended to incorporate their child's CMA results within their existing beliefs about the etiology of ASD, regardless of CMA result. However, parents' expectations for the future tended to differ depending on results; those who received genetic confirmation for their children's ASD expressed a sense of concreteness, acceptance and permanence of the condition. Some parents expressed hope for future biomedical treatments as a result of genetic research.

Database: CINAHL

**A Meta-Analysis of Single-Subject Research on Behavioral Momentum to Enhance Success in Students with Autism.**

**Author(s):** Cowan, Richard; Abel, Leah; Candel, Lindsay

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1464-1477
Abstract: We conducted a meta-analysis of single-subject research studies investigating the effectiveness of antecedent strategies grounded in behavioral momentum for improving compliance and on-task performance for students with autism. First, we assessed the research rigor of those studies meeting our inclusionary criteria. Next, in order to apply a universal metric to help determine the effectiveness of this category of antecedent strategies investigated via single-subject research methods, we calculated effect sizes via omnibus improvement rate differences (IRDs). Outcomes provide additional support for behavioral momentum, especially interventions incorporating the high-probability command sequence. Implications for research and practice are discussed, including the consideration of how single-subject research is systematically reviewed to assess the rigor of studies and assist in determining overall intervention effectiveness.

Database: CINAHL


Author(s): Armstrong, Rebecca; Whitehouse, Andrew; Scott, James; Copland, David; McMahon, Katie; Fleming, Sophie; Arnott, Wendy

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1478-1489

Abstract: The current study examined the relationship between early language ability and autistic-like traits in adulthood, utilising data from 644 participants from a longitudinal study of the general population. Language performance at 2 years was measured with the Language Development Survey (LDS), and at 20 years the participants completed the Autism-Spectrum Quotient (AQ). Vocabulary size at 2 years was negatively associated with Total AQ score, as well as scores on the Communication, and Social Skills subscales. Adults who had been late talkers were also more likely to have 'high' scores on the Communication subscale. This is the first study to show an association between early language ability and autistic-like traits in adulthood.

Database: CINAHL

An Italian Prospective Experience on the Association Between Congenital Cytomegalovirus Infection and Autistic Spectrum Disorder.

Author(s): Garofoli, Francesca; Lombardi, Giuseppina; Orcesi, Simona; Pisoni, Camilla; Mazzucchelli, Iolanda; Angelini, Micol; Balottin, Umberto; Stronati, Mauro

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1490-1495

Abstract: The aim of this retrospective study, with prospective data collection, was to correlate congenital cytomegalovirus (CMV) infection with autism spectrum disorder (ASD) and to define its prevalence. Seventy proven congenitally-infected infants, born between 2007 and 2012, were referred to our centre for CMV diagnosis and follow-up, which consisted of a consolidated protocol allowing an early evaluation of autism. We considered four children 2-year old, two of whom, at the age of 3, were diagnosed with ASD demonstrating a 2-3 fold higher prevalence (2.86%), than in general Italian population (0.66-1.36%). Our protocol enabled us to make the earliest diagnosis and highlight the role of the virus among other causes of autism, which may be a long term sequela of congenital CMV.

Database: CINAHL

Atypical Processing of Gaze Cues and Faces Explains Comorbidity between Autism Spectrum Disorder (ASD) and Attention Deficit/Hyperactivity Disorder (ADHD).

Author(s): Groom, Madeleine; Kochhar, Puja; Hamilton, Antonia; Liddle, Elizabeth; Simeou, Marina; Hollis, Chris

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1496-1509

Abstract: This study investigated the neurobiological basis of comorbidity between autism spectrum disorder (ASD) and attention deficit/hyperactivity disorder (ADHD). We compared children with ASD, ADHD or ADHD+ASD and typically developing controls (CTRL) on behavioural and electrophysiological correlates of gaze cue and face processing. We measured effects of ASD, ADHD and their interaction on the EDAN, an ERP marker of orienting visual attention towards a spatially cued location and the N170, a right-hemisphere lateralised ERP linked to face processing. We identified atypical gaze cue and face processing in children with ASD and ADHD+ASD compared with the ADHD and CTRL groups. The findings indicate a neurobiological basis for the presence of comorbid ASD symptoms in ADHD. Further research using larger samples is needed.

Database: CINAHL
Brief Report: Meeting the Needs of Medically Hospitalized Adults with Autism: A Provider and Patient Toolkit.

Author(s): Carter, Jocelyn; Broder-Fingert, Sarabed; Neumeyer, Ann; Giauque, Ann; Kao, Ann; Iyasere, Christiana

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1510-1529

Abstract: In an effort to meet the needs of adults with autism spectrum disorder (ASD) while hospitalized, a team of experts and providers from Massachusetts General Hospital (MGH), MGH for Children as well as parents of individuals with ASD was sparked in 2013. This became a multidisciplinary collaborative, the MGH Autism Care Collaborative, to improve adult care for inpatients with ASD. The collaborative was created with three goals in mind: (1) to educate internal medicine adult inpatient providers and staff on the unique needs of adults with ASD when hospitalized; (2) to create ASD specific resources for internal medicine adult inpatient providers; (3) to optimize patient care from admission to discharge among adults with ASD admitted to internal medicine services.

Database: CINAHL


Author(s): McDonald, Christin; Donnelly, James; Rodgers, Jonathan; Thomeer, Marcus; Lopata, Christopher; Jordan, Allyson

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1530-1534

Abstract: This study extended the research on correlates of adaptive functioning of high-functioning children with autism spectrum disorder (HFASD) using the Behavior Assessment System for Children-Second Edition (BASC-2). Specifically, this study investigated the relationships between adaptive behavior and age, IQ, and ASD symptomology, in a well-characterized sample of 119 children with HFASD, ages 6-11 years. Results revealed age and IQ were not significantly correlated with adaptive ability. However, total autism symptoms [measured by the Autism Diagnostic Interview-Revised (ADI-R)], as well as ASD-social symptoms were negatively correlated with adaptive ability. Mean comparisons revealed that participants falling into the clinically-significant range of the BASC-2 Adaptive Skills Composite (ASC) displayed significantly greater levels of both overall and social ASD symptoms.

Database: CINAHL

Brief Report: What Drives Parental Concerns About Their 18-Month-Olds at Familial Risk for Autism Spectrum Disorder?

Author(s): Karp, Elizabeth; Ibañez, Lisa; Warren, Zachary; Stone, Wendy

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1535-1541

Abstract: Parent-reported developmental concerns can be a first step toward further screening and intervention for children at risk for ASD. However, little is known about the extent to which parental well-being and child behavior contribute to parental concerns, especially in families who already have one child with ASD. This study included 54 parents and their 18-month-old high-risk toddlers to examine the extent to which parents' well-being (i.e., parenting stress and self-efficacy), and children's behavior (i.e., expressive language and social communication) contribute to parents' concerns regarding their toddler's development. Results revealed that parental concerns were predicted by their own well-being as well as their toddler's expressive language, highlighting the importance of addressing the needs of both parent and child in intervention settings.

Database: CINAHL

Brief Report: Characteristics of preschool children with ASD vary by ascertainment.

Author(s): Sacrey, Lori-Ann; Zwaigenbaum, Lonnie; Szatmari, Peter; Bryson, Susan; Georgiades, Stelios; Brian, Jessica; Smith, Isabel; Vaillancourt, Tracy; Garon, Nancy; Roncadin, Caroline; Elsabbagh, Mayada

Source: Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1542-1550

Abstract: Prospective studies of infant siblings of children diagnosed with autism spectrum disorder (ASD) provide a unique opportunity to characterize ASD as it unfolds. A critical question that remains unanswered is whether and how these children with ASD resemble other children identified from the community, including those with no family history. The purpose of this study was to compare clinical characteristics of children with ASD identified by each method (n = 86 per group), drawn from two Canadian longitudinal research cohorts. Children ascertained from a prospective cohort were less severely affected and included
a larger proportion of girls, compared to the clinically referred sample. These results may have important implications for conclusions drawn from studies of high-risk and clinically referred cohorts.

**Database:** CINAHL

**Brief Report: An Exploratory Study of the Diagnostic Reliability for Autism Spectrum Disorder.**

**Author(s):** Taylor, Lauren; Eapen, Valsamma; Maybery, Murray; Midford, Sue; Paynter, Jessica; Quarmby, Lyndsay; Smith, Timothy; Williams, Katrina; Whitehouse, Andrew

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1551-1558

**Abstract:** Previous research shows inconsistency in clinician-assigned diagnoses of Autism Spectrum Disorder (ASD). We conducted an exploratory study that examined the concordance of diagnoses between a multidisciplinary assessment team and a range of independent clinicians throughout Australia. Nine video-taped Autism Diagnostic Observation Schedule (ADOS) assessments were collected from two Australian sites. Twenty-seven Australian health professionals each observed two video-recordings and rated the degree to which the individual met the DSM-5 criteria for ASD. There was 100% agreement on the diagnostic classification for only 3 of the 9 video clips (33%), with the remaining 6 clips (66%) reaching poor reliability. In addition, only 24% of the participating clinicians achieved 'good' or 'excellent' levels of agreement (Cohen's kappa > 0.6) with the original ASD assessment. These findings have implications for clinical guidelines for ASD assessments.

**Database:** CINAHL

**Brief Report: Using iPads for Self-Monitoring of Students with Autism.**

**Author(s):** Xin, Joy; Sheppard, Mary; Brown, Michelle

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1559-1567

**Abstract:** This study examined the effect of using an iPad for students with autism spectrum disorder (ASD) on self-monitoring their behaviors in class. Four students with ASD were taught on-task behaviors by watching self-modeled video saved in the application 'Choiceworks' on their iPads, and collected data on their own behaviors. A single subject research design with ABAB phases was used. Student behaviors were observed using interval recording and behavioral occurrences were compared across phases. Results showed that the participating students’ on-task behaviors (e.g., facing forward, looking at teacher, i.e. eye contact, and working on the assignment) were increased when an iPad was used for their self-monitoring.

**Database:** CINAHL

**Brief Report: Autism-like Traits are Associated With Enhanced Ability to Disembed Visual Forms.**

**Author(s):** Sabatino DiCriscio, Antoinette; Troiani, Vanessa

**Source:** Journal of Autism & Developmental Disorders; May 2017; vol. 47 (no. 5); p. 1568-1576

**Abstract:** Atypical visual perceptual skills are thought to underlie unusual visual attention in autism spectrum disorders. We assessed whether individual differences in visual processing skills scaled with quantitative traits associated with the broader autism phenotype (BAP). Visual perception was assessed using the Figure-ground subtest of the Test of visual perceptual skills-3rd Edition (TVPS). In a large adult cohort (n = 209), TVPS-Figure Ground scores were positively correlated with autistic-like social features as assessed by the Broader autism phenotype questionnaire. This relationship was gender-specific, with males showing a correspondence between visual perceptual skills and autistic-like traits. This work supports the link between atypical visual perception and autism and highlights the importance in characterizing meaningful individual differences in clinically relevant behavioral phenotypes.

**Database:** CINAHL

**Integration of EEG Into Psychiatric Practice: A Step Toward Precision Medicine for Autism Spectrum Disorder.**

**Author(s):** Swatzyna, Ronald J.; Tarnow, Jay D.; Turner, Robert P.; Roark, Alexandra J.; MacInerney, Erin K.; Kozlowski, Gerald P.

**Source:** Journal of Clinical Neurophysiology; May 2017; vol. 34 (no. 3); p. 230-235

**Abstract:** Introduction: Data from an EEG is not commonly used by psychiatrists to plan treatment and medication. However, EEG abnormalities such as isolated epileptiform discharges are found to be more prevalent in psychiatric patients, particularly those diagnosed with autism spectrum disorder (ASD). Most medications prescribed for ASD lower seizure threshold and increase side effects. Therefore, it may be
prudent to order an EEG for ASD cases, especially those categorized as refractory. Methods: The data set was obtained from a multidisciplinary practice that treats a wide variety of neuroatypical children and adolescent refractory patients. This study investigated 140 nonepileptic subjects diagnosed with ASD, aged 4 to 25 years. Visual inspection of the EEG was performed to search for paroxysmal, focal, or lateralizing patterns. Results: Of the 140 subjects, the EEG data identified 36% with isolated epileptiform discharges. The χ² analysis found no significant difference between genders among the three age groups. Findings indicated a high prevalence of isolated epileptiform discharges among individuals with ASD. Conclusions: Our results find that compared with the healthy population, a large number of patients with ASD have isolated epileptiform discharges despite never having a seizure. Our findings support the use of EEG in children, adolescents, and young adults with ASD, regardless of gender or age. This is particularly true for those who exhibit aggressive behaviors or those who have failed previous medication attempts with stimulants, antidepressants, and/or antipsychotics.

Database: CINAHL

Complementary and Alternative Medicine in the School-Age Child With Autism.

Author(s): Nath, Debdeep

Source: Journal of Pediatric Healthcare; May 2017; vol. 31 (no. 3); p. 393-397

Abstract: This case study examines some common complementary and alternative treatments used in the management of behavioral and gastrointestinal symptoms associated with autism including food selectivity, abdominal pain, nausea, gastroesophageal reflux, constipation, and diarrhea. The current literature on the safety and efficacy of these treatments for pediatric patients is reviewed. This study examines therapies including gluten-free and casein-free diet, probiotics, vitamin B12, omega-3 fatty acid supplementation, chelation therapy, acupuncture, and chiropractic manipulations used in treating these core symptoms of autism.

Database: CINAHL

The Effects of Exercise Dose on Stereotypical Behavior in Children with Autism.

Author(s): Schmitz Olin, Stefanie; Mcfadden, Bridget A.; Golem, Devon L.; Pellegrino, Joseph K.; Walker, Alan J.; Sanders, David J.; Arent, Shawn M.

Source: Medicine & Science in Sports & Exercise; May 2017; vol. 49 (no. 5); p. 983-990

Abstract: Introduction: Autism spectrum disorder (ASD) is a prevalent neurological disorder in children characterized by restrictive, repetitive patterns of behavior that place an added burden on everyday functions. Aerobic exercise has the propensity to reduce stereotypic behaviors in children with ASD. This study sought to quantify the acute effect of exercise and to assess the influence of duration and intensity on the frequency of stereotypic behaviors in children with ASD. Methods: Participants in this study (N = 7, Mage = 13.0 ± 1.4 yr, Mheight = 1.64 ± 0.01 m, and Mweight = 60.1 ± 13.7 kg) underwent five separate days of treatments, including a control condition (C), a low-intensity 10-min condition (10L), a high-intensity 10-min condition (10H), a low-intensity 20-min condition (20L), and a high-intensity 20-min condition (20H) in which intensity was quantified using HR as well as RPE. Before and 60 min after exercise, the frequency of stereotypic behaviors was recorded. Results: Results indicated a reduction in behaviors in response to exercise compared with the C trial throughout all conditions except 20H. Interestingly, the most exhaustive exercise session led to increased stereotypic behaviors at all postexercise periods compared with the other exercise trials (P < 0.10). The 10L condition showed the greatest reduction at 60 min postexercise compared with the 20H or the control trial's response (P G 0.05). Examining the behavioral responses to exercise using effect sizes indicated the 10L condition showed the greatest reduction in frequency throughout all four time points (ESrange = -0.87 to -1.03) compared with baseline. Conclusion: Although it appears high-intensity aerobic exercise may exacerbate stereotypic behaviors in children with ASD, low- to moderate-intensity exercise produces significant and large reductions in these behaviors. This provides an easily administered and cost-effective way to positively impact these individuals.

Database: CINAHL

A Natural Autism Treatment.

Author(s): SEA GOLD, SUNNY

Source: Parents; May 2017; vol. 92 (no. 5); p. 26-26

Abstract: The article focuses on a new study at Arkansas Children's Research Institute on benefits on vitamins on autistic kids' health including vitamin A that help improve language and behavior in kids and vitamin B as key for optimal brain function along with views of study author Richard Frye.

Database: CINAHL
White matter microstructure in children with autistic traits.

**Author(s):** Blanken, Laura M E; Muetzel, Ryan L; Jaddoe, Vincent W V; Verhulst, Frank C; van der Lugt, Aad; Tiemeier, Henning; White, Tonya

**Source:** Psychiatry research; May 2017; vol. 263 ; p. 127-134

**Abstract:** Autism spectrum disorder (ASD) is thought to arise from aberrant development of connections in the brain. Previous studies have identified differences in white matter microstructure in children with ASD, offering support to such hypotheses. While ASD is thought to represent the severe end of a spectrum of traits, there are no studies evaluating white matter microstructure in relation to autistic traits in children from the general population. In a population-based sample of 604 6-to-10 year-old children, we assessed the relation between a continuous measure of autistic traits and white matter microstructure, using both probabilistic tractography and Tract-Based Spatial Statistics (TBSS). Using the TBSS approach, a cluster in the left superior longitudinal fasciculus (SLF) was identified where autistic traits negatively associated with fractional anisotropy (FA). In addition, two clusters of lower axial diffusion were identified; one in the corpus callosum and another in the corticospinal tract. Part of the findings remained when excluding children with ASD and were paralleled with similar, trend-level differences in 19 children with ASD, compared to matched controls. This study showed localized associations between autistic traits on a continuum and white matter microstructure, which could indicate a continuum of the neurobiology along the spectrum of autistic symptoms.

**Database:** Medline

Screening of autism based on task-free fMRI using graph theoretical approach.

**Author(s):** Sadeghi, Masoumeh; Khosrowabadi, Reza; Bakouie, Fatemeh; Mahdavi, Hoda; Eslahchi, Changiz; Pouretemad, Hamidreza

**Source:** Psychiatry research; May 2017; vol. 263 ; p. 48-56

**Abstract:** Studies on autism spectrum disorder (ASD) have indicated several dysfunctions in the structure, and functional organization of the brain. However, findings have not been established as a general diagnostic tool yet. In this regard, current study proposed an automatic screening method for recognition of ASDs from healthy controls (HCs) based on their brain functional abnormalities. In this paradigm, brain functional networks of 60 adolescent and young adult males (29 ASDs and 31 HCs) were estimated from subjects’ task-free fMRI data. Then, autism screening was developed based on characteristics of the functional networks using the following steps: A) local and global parameters of the brain functional network were calculated using graph theory. B) network parameters of the ASDs were statistically compared to the HCs. C) significantly altered parameters were used as input features of the screening system. D) performance of the system was verified using various classification techniques. The support vector machine showed superiority to others with an accuracy of 92%. Subsequently, reliability of the results was examined using an independent dataset including 20 ASDs and 20 HCs. Our findings suggest that local parameters of the brain functional network, despite the individual variability, can potentially be used for autism screening.

**Database:** Medline

Autism, attachment, and social learning: Three challenges and a way forward.

**Author(s):** Vivanti, Giacomo; Nuske, Heather J

**Source:** Behavioural brain research; May 2017; vol. 325 ; p. 251-259

**Abstract:** We explore three challenges that Autism Spectrum Disorder (ASD) poses to our understanding of the processes underlying early attachment. First, while caregiver-infant attachment and later social-affiliative behavior share common biobehavioral mechanisms, individuals with ASD are able to form secure attachment relationships, despite reduced social-emotional reciprocity and motivation for social interaction. Therefore, disruptions in social affiliation mechanisms can co-exist with secure caregiver-infant bonding. Second, while early attachment quality is associated with later social outcomes in typical development, interventions targeting caregiver-child interaction in ASD often show positive effects on parental responsibility and attachment quality, but not on child social behavior. Therefore, improvements in parent-child bonding do not necessarily result in improvements in social functioning in ASD. Third, individuals with ASD show normative brain activity and selective social affiliative behaviors in response to people that they know but not to unfamiliar people. We propose a conceptual framework to reformulate and address these three theoretical impasses posed by ASD, arguing that the dissociable pathways of child-parent bonding and social development in ASD are shaped by (1) a dissociation between externally-driven and internally-driven attachment responses and (2) atypical learning dynamics occurring during child-caregiver bonding episodes, which are governed by and influence social-affiliation motives and other operant contingencies.
**Altered expression of histamine signaling genes in autism spectrum disorder.**

**Author(s):** Wright, C; Shin, J H; Rajpurohit, A; Deep-Soboslay, A; Collado-Torres, L; Brandon, N J; Hyde, T M; Kleinman, J E; Jaffe, A E; Cross, A J; Weinberger, D R

**Source:** Translational psychiatry; May 2017; vol. 7 (no. 5); p. e1126

**Abstract:** The histaminergic system (HS) has a critical role in cognition, sleep and other behaviors. Although not well studied in autism spectrum disorder (ASD), the HS is implicated in many neurological disorders, some of which share comorbidity with ASD, including Tourette syndrome (TS). Preliminary studies suggest that antagonism of histamine receptors \(1-3\) reduces symptoms and specific behaviors in ASD patients and relevant animal models. In addition, the HS mediates neuroinflammation, which may be heightened in ASD. Together, this suggests that the HS may also be altered in ASD. Using RNA sequencing (RNA-seq), we investigated genome-wide expression, as well as a focused gene set analysis of key HS genes (HDC, HNMT, HRH1, HRH2, HRH3 and HRH4) in postmortem dorsolateral prefrontal cortex (DLPFC) initially in 13 subjects with ASD and 39 matched controls. At the genome level, eight transcripts were differentially expressed (false discovery rate <0.05), six of which were small nucleolar RNAs (snoRNAs). There was no significant diagnosis effect on any of the individual HS genes but expression of the gene set of HNMT, HRH1, HRH2 and HRH3 was significantly altered. Curated HS gene sets were also significantly differentially expressed. Differential expression analysis of these gene sets in an independent RNA-seq ASD data set from DLPFC of 47 additional subjects confirmed these findings. Understanding the physiological relevance of an altered HS may suggest new therapeutic options for the treatment of ASD.

**Peers Influence Prosocial Behavior in Adolescent Males with Autism Spectrum Disorders.**

**Author(s):** Van Hoorn, Jorien; Van Dijk, Eric; Crone, Eveline A; Stockmann, Lex; Rieffe, Carolien

**Source:** Journal of autism and developmental disorders; May 2017

**Abstract:** Peer influence has a profound impact on decision-making in typically developing adolescents. In this study, we examined to what extent adolescent males (age 11-17 years; \(N = 144\)) with and without autism (ASD) were influenced by peer feedback on prosocial behavior, and which factors were related to individual differences in peer feedback sensitivity. In a public goods game, participants made decisions about the allocation of tokens between themselves and their group in absence or presence of peer feedback. Adolescents with and without ASD were sensitive to peer feedback on prosocial behavior. More autism traits and social interest were associated with less sensitivity to antisocial feedback, suggesting that peer feedback creates opportunities for social adjustment in those with and without ASD.

**GPs' confidence in caring for their patients on the autism spectrum: an online self-report study.**

**Author(s):** Unigwe, Silvana; Buckley, Carole; Crane, Laura; Kenny, Lorcan; Remington, Anna; Pellicano, Elizabeth

**Source:** The British journal of general practice : the journal of the Royal College of General Practitioners; May 2017

**Abstract:** BACKGROUND In the UK, GPs play a key role in the identification and management of children, young people, and adults on the autism spectrum, but there is a paucity of research on GPs' perceptions of working with these patients. AIM To understand GPs' perceived self-efficacy in identifying and managing their patients on the autism spectrum, and the factors affecting this. DESIGN AND SETTING An online self-report survey was developed for completion by GPs across the UK. METHODOA total of 304 GPs in the UK took part. The survey collected responses on participants' background, training, and experience, both as a GP and with regard to autism, and included a 22-item knowledge of autism questionnaire, a 14-item self-efficacy scale targeting GPs' perceived confidence in identifying and managing their autistic patients, and an open question eliciting participants' experiences of working with autistic people. RESULTS In total, 39.5% (\(n = 120\)) of GP participants reported never having received formal training in autism. Despite demonstrating good knowledge of its key features, participants reported limited confidence in their abilities to identify and manage autistic patients, with many citing a number of barriers that overwhelmingly focused on perceived failings of the current healthcare system (such as a lack of clarity around referral
CONCLUSION There is an urgent need for improved local specialist service provision alongside clearer referral pathways for diagnosis to improve both GPs’ confidence in caring for their autistic patients and the healthcare experiences of autistic patients and their families. Local clinical commissioning groups are best served to assist GPs in ensuring that they can reliably detect the condition and make appropriate provisions for support.

Database: Medline

**Autism in Southeast Europe: A Survey of Caregivers of Children with Autism Spectrum Disorders.**

**Author(s):** Daniels, Amy M; Como, Ariel; Hergüner, Sabri; Kostadinova, Krasimira; Stosic, Jasmina; Shih, Andy

**Source:** Journal of autism and developmental disorders; May 2017

**Abstract:** The aim of this study was to understand the diagnostic, service and lived experiences of families affected by ASD in Southeast Europe. A total of 758 caregivers from Albania, Bulgaria, Croatia and Turkey were surveyed from 2013 to 2015 about characteristics of the child with ASD; service encounters; and caregiver perceptions. The average age at first concern was 24.4 months (SD 11.8) and at diagnosis, 40.0 months (SD 19.0). Psychiatrists were the most common diagnostician; most children received some ASD-related service, most frequently speech and language therapy. Caregivers endorsed challenges in access to care and perceived stigma. Despite country differences, findings relative to age at first concern, disparities in access and service utilization, and stigma speak to common regional needs.

Database: Medline

**Blood Mercury, Arsenic, Cadmium, and Lead in Children with Autism Spectrum Disorder.**

**Author(s):** Li, Huamei; Li, Hui; Li, Yun; Liu, Yujie; Zhao, Zhengyan

**Source:** Biological trace element research; May 2017

**Abstract:** Environmental factors have been implicated in the etiology of autism spectrum disorder (ASD); however, the role of heavy metals has not been fully defined. This study investigated whether blood levels of mercury, arsenic, cadmium, and lead of children with ASD significantly differ from those of age- and sex-matched controls. One hundred eighty unrelated children with ASD and 184 healthy controls were recruited. Data showed that the children with ASD had significantly (p < 0.001) higher levels of mercury and arsenic and a lower level of cadmium. The levels of lead did not differ significantly between the groups. The results of this study are consistent with numerous previous studies, supporting an important role for heavy metal exposure, particularly mercury, in the etiology of ASD. It is desirable to continue future research into the relationship between ASD and heavy metal exposure.

Database: Medline

**Variable Sensory Perception in Autism.**

**Author(s):** Haigh, Sarah M

**Source:** The European journal of neuroscience; May 2017

**Abstract:** Autism is associated with sensory and cognitive abnormalities. Individuals with autism generally show normal or superior early sensory processing abilities compared to healthy controls, but deficits in complex sensory processing. In the current opinion paper, it will be argued that sensory abnormalities impact cognition by limiting the amount of signal that can be used to interpret and interact with environment. There is a growing body of literature showing that individuals with autism exhibit greater trial-to-trial variability in behavioural and cortical sensory responses. If multiple sensory signals that are highly variable are added together to process more complex sensory stimuli, then this might destabilize later perception and impair cognition. Methods to improve sensory processing have shown improvements in more general cognition. Studies that specifically investigate differences in sensory trial-to-trial variability in autism, and the potential changes in variability before and after treatment, could ascertain if trial-to-trial variability is a good mechanism to target for treatment in autism. This article is protected by copyright. All rights reserved.

Database: Medline

**Dose-Response Effects of Long-Acting Liquid Methylphenidate in Children with Attention Deficit/Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD): A Pilot Study.**

**Author(s):** Kim, Soo-Jeong; Shonka, Sophia; French, William P; Strickland, Jennifer; Miller, Lindsey; Stein, Mark A

**Source:** Journal of autism and developmental disorders; May 2017
**Abstract:** Attention deficit/hyperactivity disorder (ADHD) symptoms are common in youth with autism spectrum disorders (ASD) and are frequently treated with stimulant medications. Twenty-seven children were randomized to different dose titration schedules, and ADHD symptoms, tolerability, and aberrant behaviors were assessed weekly during a 6-week trial with long-acting liquid methylphenidate (MPH). MPH at low to moderate doses was effective in reducing ADHD symptoms and was well tolerated in young children with ASD and ADHD. Future studies are needed to assess generalization and maintenance of efficacy.

**Database:** Medline

**Identifying the clinical needs and patterns of health service use of adolescent girls and women with autism spectrum disorder.**

**Author(s):** Tint, Ami; Weiss, Jonathan A; Lunsky, Yona

**Source:** Autism research : official journal of the International Society for Autism Research; May 2017

**Abstract:** Girls and women in the general population present with a distinct profile of clinical needs and use more associated health services compared to boys and men; however, research focused on health service use patterns among girls and women with Autism Spectrum Disorder (ASD) is limited. In the current study, caregivers of 61 adolescent girls and women with ASD and 223 boys and men with ASD completed an online survey. Descriptive analyses were conducted to better understand the clinical needs and associated service use patterns of girls and women with ASD. Sex/gender comparisons were made of individuals' clinical needs and service use. Adolescent girls and women with ASD had prevalent co-occurring mental and physical conditions and parents reported elevated levels of caregiver strain. Multiple service use was common across age groups, particularly among adolescent girls and women with intellectual disability. Overall, few sex/gender differences emerged, although a significantly greater proportion of girls and women accessed psychiatry and emergency department services as compared to boys and men. Though the current study is limited by its use of parent report and small sample size, it suggests that girls and women with ASD may share many of the same high clinical needs and patterns of services use as boys and men with ASD. Areas for future research are discussed to help ensure appropriate support is provided to this understudied population.

**Database:** Medline

**Developmental functioning and medical Co-morbidity profile of children with complex and essential autism.**

**Author(s):** Flor, Jaimie; Bellando, Jayne; Lopez, Maya; Shui, Amy

**Source:** Autism research : official journal of the International Society for Autism Research; May 2017

**Abstract:** Children with Autism Spectrum Disorders (ASD) may be characterized as "complex" (those with microcephaly and/or dysmorphology) or "essential" (those with neither of these two). Previous studies found subjects in the complex group exhibited lower IQ scores, poorer response to behavioral intervention, more seizures and more abnormal EEGs and brain MRIs compared to the essential group. The objective of this study was to determine if there are differences in complex versus essential subjects based on several developmental/psychological measures as well as certain medical comorbidities. This study utilized data from 1,347 individuals (2-17 years old) well-characterized subjects enrolled in Autism Treatment Network (ATN) Registry. Head circumference measurement and the Autism Dysmorphology Measure (ADM) were used by trained physicians to classify subjects as complex or essential. Significantly lower scores were seen for complex subjects in cognitive level, adaptive behavior and quality of life. Complex subjects showed significantly increased physician-documented GI symptoms and were on a higher number of medications. No significant differences in autism severity scores, behavioral ratings and parent-reported sleep problems were found. After adjusting for multiple comparisons made, adaptive scores remained significantly lower for the complex group, and the complex group used a significantly higher number of medications and had increased GI symptoms. Complex and essential autism subtypes may have distinct developmental and medical correlates and thus underlines the importance of looking for microcephaly and dysmorphology, when evaluating a child with autism. Determining this distinction in autism may have implications in prognosis, identifying medical co-morbidities, directing diagnostic evaluations and treatment interventions.

**Database:** Medline

**Atypical perception in autism: A Failure of Perceptual Specialization?**

**Author(s):** Hadad, Bat Sheva; Goldstein, Eugenia K; Russo, Natalie N

**Source:** Autism research : official journal of the International Society for Autism Research; May 2017
Abstract: We examined whether reduced perceptual specialization underlies atypical perception in autism spectrum disorder (ASD) testing classifications of stimuli that differ either along integral dimensions (prototypical integral dimensions of value and chroma), or along separable dimensions (prototypical separable dimensions of value and size). Current models of the perception of individuals with an ASD would suggest that on these tasks, individuals with ASD would be as, or more, likely to process dimensions as separable, regardless of whether they represented separable or integrated dimensions. In contrast, reduced specialization would propose that individuals with ASD would respond in a more integral manner to stimuli that differ along separable dimensions, and at the same time, respond in a more separable manner to stimuli that differ along integral dimensions. A group of nineteen adults diagnosed with high functioning ASD and seventeen typically developing participants of similar age and IQ, were tested on speeded and restricted classifications tasks. Consistent with the reduced specialization account, results show that individuals with ASD do not always respond more analytically than typically developed (TD) observers: Dimensions identified as integral for TD individuals evoke less integral responding in individuals with ASD, while those identified as separable evoke less analytic responding. These results suggest that perceptual representations are more broadly tuned and more flexibly represented in ASD.

Database: Medline

Exploration and Comparison of Adolescents With Autism Spectrum Disorder and Their Caregiver's Perspectives on Transitioning to Adult Health Care and Adulthood.

Author(s): Cheak-Zamora, Nancy C; Teti, Michelle; Maurer-Batjer, Anna; Koegler, Erica

Source: Journal of pediatric psychology; May 2017

Abstract: Background Adolescents with autism spectrum disorder (ASD) experience challenges achieving independence. Few studies assess both adolescents and caregivers' needs as adolescents transition to adult health care. This study explored and compared the health-related independence experiences of 27 adolescents with ASD and their caregivers. Caregivers participated in focus groups and adolescents participated in semi-structured interviews. Thematic analysis of dyads' responses highlighted three common themes: (a) efforts toward independence, (b) low self-efficacy for adolescents' independence, and (c) desire for independence. Nuances in responses indicated that although members of dyads shared many experiences, they were not communicating these experiences with each other. Results suggest both groups understand the importance of health-related independence and are motivated to achieve independence but lack skills and supports. Improved communication about experiences and goals between caregivers, adolescents, and the care team are needed. These findings can inform future interventions to better support adolescents' transition to adult health care.

Database: Medline

The Prevalence of Internet Addiction Among a Japanese Adolescent Psychiatric Clinic Sample With Autism Spectrum Disorder and/or Attention-Deficit Hyperactivity Disorder: A Cross-Sectional Study.

Author(s): So, Ryuhei; Makino, Kazunori; Fujiwara, Masaki; Hirota, Tomoya; Ohcho, Kozo; Ikeda, Shin; Tsubouchi, Shouko; Inagaki, Masatoshi

Source: Journal of autism and developmental disorders; May 2017

Abstract: Extant literature suggests that autism spectrum disorder (ASD) and attention-deficit hyperactivity disorder (ADHD) are risk factors for internet addiction (IA). The present cross-sectional study explored the prevalence of IA among 132 adolescents with ASD and/or ADHD in a Japanese psychiatric clinic using Young's Internet Addiction Test. The prevalence of IA among adolescents with ASD alone, with ADHD alone and with comorbid ASD and ADHD were 10.8, 12.5, and 20.0%, respectively. Our results emphasize the clinical importance of screening and intervention for IA when mental health professionals see adolescents with ASD and/or ADHD in psychiatric services.

Database: Medline


Author(s): Brosnan, Mark; Ashwin, Chris; Lewton, Marcus

Source: Journal of autism and developmental disorders; May 2017

Abstract: Dual Process Theory has recently been applied to Autism spectrum disorder (ASD) to suggest that reasoning by people with ASD and people with higher levels of ASD-like traits can be characterised by reduced intuitive and greater reflective processing. 26 adolescents and adults with ASD and 22 adolescent and adult controls completed an assessment of ASD-like traits, the cognitive reflections test (CRT) to measure intuitive and reflective reasoning and an index of general cognitive ability. The ASD group
produced less intuitive responses, and the degree of ASD-like traits showed a negative correlation with intuitive responses and positive correlation with reflective responses on the CRT. Together, these results are consistent with ASD being associated with reduced intuitive reasoning and greater deductive reasoning.

**Database:** Medline

**Teaching Functional Play Skills to a Young Child with Autism Spectrum Disorder through Video Self-Modeling.**

**Author(s):** Lee, Sharon Y; Lo, Ya-Yu; Lo, Yafen

**Source:** Journal of autism and developmental disorders; May 2017

**Abstract:** The researchers used a single-case, multiple probe design across three sets of toys (i.e., farm toy, doctor's clinic toy, and rescue toy) to examine the effects of video self-modeling (VSM) on the functional play skills of a 5-year-old child with autism spectrum disorder. The findings showed a functional relation between VSM and increased percentages of functional play actions across the toy sets. The participant's percentages of the targeted functional play skills for the intervention toys remained high 1 week and 2 weeks after the intervention ceased. Additionally, preliminary generalization results showed slight improvement in the percentages of functional play actions with the generalization toys that were not directly taught. Limitations, practical implications, and directions for future research are discussed.

**Database:** Medline

**GapMap: Enabling Comprehensive Autism Resource Epidemiology.**

**Author(s):** Albert, Nikhila; Daniels, Jena; Schwartz, Jessey; Du, Michael; Wall, Dennis P

**Source:** JMIR public health and surveillance; May 2017; vol. 3 (no. 2); p. e27

**Abstract:** BACKGROUND For individuals with autism spectrum disorder (ASD), finding resources can be a lengthy and difficult process. The difficulty in obtaining global, fine-grained autism epidemiological data hinders researchers from quickly and efficiently studying large-scale correlations among ASD, environmental factors, and geographical and cultural factors. OBJECTIVE The objective of this study was to define resource load and resource availability for families affected by autism and subsequently create a platform to enable a more accurate representation of prevalence rates and resource epidemiology. METHODS We created a mobile application, GapMap, to collect locational, diagnostic, and resource use information from individuals with autism to compute accurate prevalence rates and better understand autism resource epidemiology. GapMap is hosted on AWS S3, running on a React and Redux front-end framework. The backend framework is comprised of an AWS API Gateway and Lambda Function setup, with secure and scalable end points for retrieving prevalence and resource data, and for submitting participant data. Measures of autism resource scarcity, including resource load, resource availability, and resource gaps were defined and preliminarily computed using simulated or scraped data. RESULTS The average distance from an individual in the United States to the nearest diagnostic center is approximately 182 km (50 miles), with a standard deviation of 235 km (146 miles). The average distance from an individual with ASD to the nearest diagnostic center, however, is only 32 km (20 miles), suggesting that individuals who live closer to diagnostic services are more likely to be diagnosed. CONCLUSIONS This study confirmed that individuals closer to diagnostic services are more likely to be diagnosed and proposes GapMap, a means to measure and enable the alleviation of increasingly overburdened diagnostic centers and resource-poor areas where parents are unable to diagnose their children as quickly and easily as needed. GapMap will collect information that will provide more accurate data for computing resource loads and availability, uncovering the impact of resource epidemiology on age and likelihood of diagnosis, and gathering localized autism prevalence rates.

**Database:** Medline

**Semantic richness and word learning in children with autism spectrum disorder.**

**Author(s):** Gladfelter, Allison; Goffman, Lisa

**Source:** Developmental science; May 2017

**Abstract:** Semantically rich learning contexts facilitate semantic, phonological, and articulatory aspects of word learning in children with typical development (TD). However, because children with autism spectrum disorder (ASD) show differences at each of these processing levels, it is unclear whether they will benefit from semantic cues in the same manner as their typical peers. The goal of this study was to track how the inclusion of rich, sparse, or no semantic cues influences semantic, phonological, and articulatory aspects of word learning in children with ASD and TD over time. Twenty-four school-aged children (12 in each group), matched on expressive vocabulary, participated in an extended word learning paradigm. Performance on
five measures of learning (referent identification, confrontation naming, defining, phonetic accuracy, and speech motor stability) were tracked across three sessions approximately one week apart to assess the influence of semantic richness on extended learning. Results indicate that children with ASD benefit from semantically rich learning contexts similarly to their peers with TD; however, one key difference between the two groups emerged - the children with ASD showed heightened shifts in speech motor stability. These findings offer insights into common learning mechanisms in children with ASD and TD, as well as pointing to a potentially distinct speech motor learning trajectory in children with ASD, providing a window into the emergence of stereotypic vocalizations in these children.

**Database:** Medline

**Classroom Displays-Attraction or Distraction? Evidence of Impact on Attention and Learning From Children With and Without Autism.**

**Author(s):** Hanley, Mary; Khairat, Mariam; Taylor, Korey; Wilson, Rachel; Cole-Fletcher, Rachel; Riby, Deborah M

**Source:** Developmental psychology; May 2017

Available in full text at Developmental Psychology - from ProQuest

**Abstract:** Paying attention is a critical first step toward learning. For children in primary school classrooms there can be many things to attend to other than the focus of a lesson, such as visual displays on classroom walls. The aim of this study was to use eye-tracking techniques to explore the impact of visual displays on attention and learning for children. Critically, we explored these issues for children developing typically and for children with autism spectrum disorder (ASD). Both groups of children watched videos of a teacher delivering classroom activities-2 of "story-time" and 2 mini lessons. Half of the videos each child saw contained high levels of classroom visual displays in the background (high visual display [HVD]) and half had none (no visual display [NVD]). Children completed worksheets after the mini lessons to measure learning. During viewing of all videos children's eye movements were recorded. The presence of visual displays had a significant impact on attention for all children, but to a greater extent for children with ASD. Visual displays also had an impact on learning from the mini lessons, whereby children had poorer learning scores in the HVD compared with the NVD lesson. Individual differences in age, verbal, nonverbal, and attention abilities were important predictors of learning, but time spent attending the visual displays in HVD was the most important predictor. This novel and timely investigation has implications for the use of classroom visual displays for all children, but particularly for children with ASD.

**Database:** Medline

**Pharmacogenomics and Efficacy of Risperidone Long-Term Treatment in Thai Autistic Children and Adolescents.**

**Author(s):** Nuntamool, Nopphadol; Ngamsamut, Nattawat; Vanwong, Natchaya; Puangpetch, Apichaya; Chamnanpholph, Monpat; Hongkaew, Yaowaluck; Limsila, Penkhae; Suthisisang, Chuthamanee; Wilffert, Bob; Sukasem, Chonlaphat

**Source:** Basic & clinical pharmacology & toxicology; May 2017

**Abstract:** The purpose of this study was to evaluate the association of pharmacogenomic factors and clinical outcomes in autistic children and adolescents who were treated with risperidone for long periods. Eighty-two autistic subjects diagnosed with DSM-IV and who were treated with risperidone for more than 1 year were recruited. Pharmacogenomics and clinical outcome (CGI-I, aggressive, over-activity and repetitive score) were evaluated. Almost all patients showed stable symptoms on aggressive behaviour (89.02%), over-activity (71.95%), repetitive (70.89%) behavior and all clinical symptoms (81.71%). Only 4.48% of patients showed minimally worse CGI-I score. Patients in the non-stable symptom group had DRD2 Taq1A non-wildtype (TT and CT) frequencies higher than the clinically stable group (P = 0.04), whereas other gene polymorphisms showed no significant association. Haplotype ACCTCAT (rs6311, rs1045642, rs1128503, rs1800497, rs4436578, rs1799978, rs6280) showed a significant association with non-stable clinical outcome (χ2 = 6.642, p = 0.010). Risperidone levels showed no association with any clinical outcomes. On the other hand, risperidone dose, 9-OH Risperidone levels and prolactin levels were significantly higher in the non-stable compared to the stable symptom group (P = 0.013, P = 0.044, P = 0.030). Increased appetite was the most common adverse drug reaction and associated with higher body weight, whereas it was not significantly associated with genetic variations and non-genetic information. In conclusion, risperidone showed efficacy to control autism, especially aggressive symptoms in long-term treatment. However, Taq1A T - carrier of dopamine2 receptor gene is associated with non-stable response in risperidone-treated patients. This study supports pharmacogenomics testing for personalized therapy with risperidone in autistic children and adolescents. This article is protected by copyright. All rights reserved.
**Database:** Medline

**Statistical word learning in children with autism spectrum disorder and specific language impairment.**

**Author(s):** Haebig, Eileen; Safran, Jenny R; Ellis Weismer, Susan

**Source:** Journal of child psychology and psychiatry, and allied disciplines; May 2017

**Abstract:** BACKGROUND Word learning is an important component of language development that influences child outcomes across multiple domains. Despite the importance of word knowledge, word-learning mechanisms are poorly understood in children with specific language impairment (SLI) and autism spectrum disorder (ASD). This study examined underlying mechanisms of word learning, specifically, statistical learning and fast-mapping, in school-aged children with typical and atypical development. METHODS Statistical learning was assessed through a word segmentation task and fast-mapping was examined in an object-label association task. We also examined children's ability to map meaning onto newly segmented words in a third task that combined exposure to an artificial language and a fast-mapping task. RESULTS Children with SLI had poorer performance on the word segmentation and fast-mapping tasks relative to the typically developing and ASD groups, who did not differ from one another. However, when children with SLI were exposed to an artificial language with phonemes used in the subsequent fast-mapping task, they successfully learned more words than in the isolated fast-mapping task. There was some evidence that word segmentation abilities are associated with word learning in school-aged children with typical development and ASD, but not SLI. Follow-up analyses also examined performance in children with ASD who did and did not have a language impairment. Children with ASD with language impairment evidenced intact statistical learning abilities, but subtle weaknesses in fast-mapping abilities. CONCLUSIONS As the Procedural Deficit Hypothesis (PDH) predicts, children with SLI have impairments in statistical learning. However, children with SLI also have impairments in fast-mapping. Nonetheless, they are able to take advantage of additional phonological exposure to boost subsequent word-learning performance. In contrast to the PDH, children with ASD appear to have intact statistical learning, regardless of language status; however, fast-mapping abilities differ according to broader language skills.

**Database:** Medline

**The association of environmental toxicants and autism spectrum disorders in children.**

**Author(s):** Ye, Bi Su; Leung, Anna Oi Wah; Wong, Ming Hung

**Source:** Environmental pollution (Barking, Essex : 1987); May 2017; vol. 227 ; p. 234-242

**Abstract:** Environmental pollution (Barking, Essex) is a growing problem, and has increased at a steady rate in recent years. However, the etiology of autism is still poorly understood. Humans are at higher risk of chemical exposure than in the past as a result of the increasing usage of chemicals in various fields, including food preservation, agriculture, industrial production, etc. A number of environmental agents have been suggested as contributing factors to ASD pathogenesis, which includes heavy metals (Hg and Pb), persistent organic pollutants (DDT, PBDEs and PCBs) and emerging chemicals of concern (phthalates and BPA). These three main categories of toxicants could be the cause of ASD in children. Recent research into the causes of ASD that have been linked to environment factors are reviewed in this paper. There are evidence supporting the etiological link between exposure to environmental toxicants and the development of ASD. Children exposed to these toxicants in the environment exhibit signature traits of ASD and have been reported with high body burdens of these chemicals and/or their metabolites, which may provide an explanation for the observed relation, yet comprehensive evidence in humans is limited, highlighting the need for further research.

**Database:** Medline

**Maternal experience raising girls with autism spectrum disorder: a qualitative study.**

**Author(s):** Navot, N; Jorgenson, A G; Webb, S J

**Source:** Child: care, health and development; May 2017

**Abstract:** BACKGROUND A growing line of research has sought to characterize the different presentations of autism spectrum disorder (ASD) among boys and girls. Much less is known about maternal experience and mother-child relationship in children with ASD based on child gender. The present qualitative study aimed to investigate the mother-daughter relationship from the perspective of mothers who are raising girls with ASD with normal intelligence and functional verbal communication. METHODS Eleven in-depth interviews were conducted with mothers of girls with ASD, ages 10-19 years. Data were analysed in an interactive process commonly used in naturalistic inquiry. Results provide insight into the unique maternal experience of raising a daughter with ASD. RESULTS Mothers reported a sense of exclusion from the
neurotypical population and male-dominant ASD population and transformation in relationship. Themes identified were skepticism and delayed diagnosis, disbelief from others, lack of information about girls with ASD, higher social demands in adolescence, puberty challenges around hygiene, disappointment about physical appearance, vulnerability in relationships and worries about future functioning. The mother-daughter relationship started with an early expectation of a close and intimate relationship that then underwent a transformation, which challenged maternal competence, reshaped expectations and created a different bond between mother and daughter. CONCLUSIONS The findings in this qualitative study highlight the impact of gender on the maternal experience of raising a daughter with ASD and contribute to a better understanding of the needs of both mothers and daughters. These results can help providers support the mother-daughter dyad by recognizing gender-specific challenges.

Database: Medline

Social skills training for children with autism spectrum disorder using a robotic behavioral intervention system.

Author(s): Yun, Sang-Seok; Choi, JongSuk; Park, Sung-Kee; Bong, Gui-Young; Yoo, HeeJeong

Source: Autism research : official journal of the International Society for Autism Research; May 2017

Abstract: We designed a robot system that assisted in behavioral intervention programs of children with autism spectrum disorder (ASD). The eight-session intervention program was based on the discrete trial teaching protocol and focused on two basic social skills: eye contact and facial emotion recognition. The robotic interactions occurred in four modules: training element query, recognition of human activity, coping-mode selection, and follow-up action. Children with ASD who were between 4 and 7 years old and who had verbal IQ ≥ 60 were recruited and randomly assigned to the treatment group (TG, n = 8, 5.75 ± 0.89 years) or control group (CG, n = 7; 6.32 ± 1.23 years). The therapeutic robot facilitated the treatment intervention in the TG, and the human assistant facilitated the treatment intervention in the CG. The intervention procedures were identical in both groups. The primary outcome measures included parent-completed questionnaires, the Autism Diagnostic Observation Schedule (ADOS), and frequency of eye contact, which was measured with the partial interval recording method. After completing treatment, the eye contact percentages were significantly increased in both groups. For facial emotion recognition, the percentages of correct answers were increased in similar patterns in both groups compared to baseline (P > 0.05), with no difference between the TG and CG (P > 0.05). The subjects' ability to play, general behavioral and emotional symptoms were significantly diminished after treatment (p < 0.05). These results showed that the robot-facilitated and human-facilitated behavioral interventions had similar positive effects on eye contact and facial emotion recognition, which suggested that robots are useful mediators of social skills training for children with ASD.

Database: Medline

Detection and Treatment of Autism Spectrum Disorder by Occupational Therapy Practitioners: Addressing Racial Disparity in Diagnosis.

Author(s): Gibbs, Varleisha D

Source: The American journal of occupational therapy : official publication of the American Occupational Therapy Association; ; vol. 71 (no. 3); p. 7103360010p1

Abstract: As the prevalence of autism spectrum disorder (ASD) continues to rise, racial disparities remain in age of diagnosis and initiation of treatment. Therefore, occupational therapy practitioners should examine cultural perceptions related to disparities in ASD diagnosis. This article investigates the role that practitioners may play in this disparity by asking, “Are occupational therapy practitioners contributing to the late diagnosis of children with ASD who are members of particular racial or ethnic groups?” Correlations among practitioners' detection of symptoms, parents' perceptions, and evaluator influences are investigated. By examining these factors, practitioners may gain better insight into these disparities and therefore provide more effective advocacy regarding early diagnosis and treatment access.

Database: Medline

Characteristics of Students Receiving Occupational Therapy Services in Transition and Factors Related to Postsecondary Success.

Author(s): Eismann, Maria M; Weisshaar, Rebecca; Capretta, Cristina; Cleary, Dennis S; Kirby, Anne V; Persch, Andrew C

Source: The American journal of occupational therapy : official publication of the American Occupational Therapy Association; ; vol. 71 (no. 3); p. 7103100010p1
Abstract: OBJECTIVE This study had a twofold purpose: (1) identify the characteristics of people with disabilities who received occupational therapy services during their transition to adulthood and (2) determine factors associated with their successful postsecondary transition. METHOD This study was a secondary analysis of National Longitudinal Transition Study-2 data. Data analyses include descriptive statistics, binary logistic regression, and simple linear regression. RESULTS Autism, cerebral palsy, and intellectual disability were the most commonly reported disability classifications. Participation in postsecondary education was significantly associated with functional use of arms and hands. Postsecondary employment was significantly associated with verbal comprehension. Participation in community activities was significantly related to students' health status, and participation in community service was significantly related to students' functional use of arms and hands. CONCLUSION Providing transition services to students with disabilities remains an emerging area of practice. Occupational therapy practitioners may contribute to transition teams by intervening to improve functional abilities and health status.

Database: Medline


Author(s): Egilson, Snæfrídur T; Jakobsdóttir, Gunnhildur; Ólafsson, Kjartan; Leósdóttir, Thóra

Source: Scandinavian journal of occupational therapy; May 2017; vol. 24 (no. 3); p. 187-196

Abstract: AIM This study explored parent perspectives of participation patterns and environmental supports and barriers for high-functioning children with autism spectrum disorder (ASD) within their communities compared with a group of children without ASD. METHOD The Participation and Environment Measure for Children and Youth was used to gather online data from parents of 99 children with ASD and 241 children without ASD. Mann-Whitney U test and chi-square tests were used to explore differences between groups and Cohen's d was calculated to examine effect sizes. RESULTSSignificant differences between children with and without ASD were observed for all participation and environment summary scores. Children with ASD participated less frequently, were less involved, and their parents were less satisfied with their child's participation in community-based activities. Parents of children with ASD also identified fewer supports for their child's participation and more environmental barriers than other parents. CONCLUSION Children with ASD participated less in community-related activities than children without ASD as perceived by their parents. Barriers limiting community participation included features of the social and physical environment and limited resources. SIGNIFICANCE Occupational therapists should focus on decreasing environmental challenges in their efforts to facilitate participation of children with ASD in the community.

Database: Medline

Face perception and learning in autism spectrum disorders.

Author(s): Webb, Sara Jane; Neuhaus, Emily; Faja, Susan

Source: Quarterly journal of experimental psychology (2006); May 2017; vol. 70 (no. 5); p. 970-986

Abstract: Autism Spectrum Disorder (ASD) is characterized by impairment in social communication and restricted and repetitive interests. While not included in the diagnostic characterization, aspects of face processing and learning have shown disruptions at all stages of development in ASD, although the exact nature and extent of the impairment vary by age and level of functioning of the ASD sample as well as by task demands. In this review, we examine the nature of face attention, perception, and learning in individuals with ASD focusing on three broad age ranges (early development, middle childhood, and adolescence/adulthood). We propose that early delays in basic face processing contribute to the atypical trajectory of social communicative skills in individuals with ASD and contribute to poor social learning throughout development. Face learning is a life-long necessity, as the social world of individual only broadens with age, and thus addressing both the source of the impairment in ASD as well as the trajectory of ability throughout the lifespan, through targeted treatments, may serve to positively impact the lives of individuals who struggle with social information and understanding.

Database: Medline

A comprehensive systematic review and meta-analysis of pharmacological and dietary supplement interventions in paediatric autism: moderators of treatment response and recommendations for future research.

Author(s): Masi, A; Lampit, A; DeMayo, M M; Glozier, N; Hickie, I B; Guastella, A J
Abstract: BACKGROUND Autism spectrum disorders (ASDs) are pervasive and multifactorial neurodevelopmental conditions, characterized by impairments in social communication and interaction, and restricted, repetitive patterns of behaviour, interests or activities. Treatment options to ameliorate symptoms of ASDs are limited. Heterogeneity complicates the quest for personalized medicine in this population. Our aim was to investigate if there are baseline characteristics of patients that moderate response or trial design features that impede the identification of efficacious interventions for ASDs. METHOD Literature searches of EMBASE, MEDLINE and PsycINFO identified 43 studies for qualitative assessment of baseline characterization of participants and 37 studies for quantitative analysis of moderators of treatment response. Criteria included blinded randomized controlled trials (RCTs) in paediatric ASD, with at least 10 participants per arm or 20 overall, of oral treatments, including pharmacological interventions and dietary supplements. RESULTS Random-effects meta-analysis of 1997 participants (81% male) identified three moderators associated with an increase in treatment response: trials located in Europe and the Middle-East; outcome measures designated primary status; and the type of outcome measure. Inconsistent reporting of baseline symptom severity and intellectual functioning prevented analysis of these variables. Qualitative synthesis of baseline characteristics identified at least 31 variables, with only age and gender reported in all trials. Biological markers were included in six RCTs. CONCLUSIONS Few trials reported adequate baseline characteristics to permit detailed analysis of response to treatment. Consideration of geographical location, baseline severity and intellectual function is required to ensure generalizability of results. The use of biological markers and correlates in ASD trials remains in its infancy. There is great need to improve the application of baseline characterization and incorporation of biological markers and correlates to permit selection of participants into homogeneous subgroups and to inform response to treatment in ASD.

Database: Medline

Bayesian approaches to autism: Towards volatility, action, and behavior.

Author(s): Palmer, Colin J; Lawson, Rebecca P; Hohwy, Jakob

Abstract: Autism spectrum disorder currently lacks an explanation that bridges cognitive, computational, and neural domains. In the past 5 years, progress has been sought in this area by drawing on Bayesian probability theory to describe both social and nonsocial aspects of autism in terms of systematic differences in the processing of sensory information in the brain. The present article begins by synthesizing the existing literature in this regard, including an introduction to the topic for unfamiliar readers. The key proposal is that autism is characterized by a greater weighting of sensory information in updating probabilistic representations of the environment. Here, we unpack further how the hierarchical setting of Bayesian inference in the brain (i.e., predictive processing) adds significant depth to this approach. In particular, autism may relate to finer mechanisms involved in the context-sensitive adjustment of sensory weightings, such as in how neural representations of environmental volatility inform perception. Crucially, in light of recent sensorimotor treatments of predictive processing (i.e., active inference), hypotheses regarding atypical sensory weighting in autism have direct implications for the regulation of action and behavior. Given that core features of autism relate to how the individual interacts with and samples the world around them (e.g., reduced social responding, repetitive behaviors, motor impairments, and atypical visual sampling), the extension of Bayesian theories of autism to action will be critical for yielding insights into this condition. (PsycINFO Database Record)

Database: Medline

Reduced specificity in emotion judgment in people with autism spectrum disorder.

Author(s): Wang, Shuo; Adolphs, Ralph

Abstract: There is a conflicting literature on facial emotion processing in autism spectrum disorder (ASD): both typical and atypical performance have been reported, and inconsistencies in the literature may stem from different processes examined (emotion judgment, face perception, fixations) as well as differences in participant populations. Here we conducted a detailed investigation of the ability to discriminate graded emotions shown in morphs of fear-happy faces, in a well-characterized high-functioning sample of participants with ASD and matched controls. Signal detection approaches were used in the analyses, and concurrent high-resolution eye-tracking was collected. Although people with ASD had typical thresholds for
categorical fear and confidence judgments, their psychometric specificity to detect emotions across the entire range of intensities was reduced. However, fixation patterns onto the stimuli were typical and could not account for the reduced specificity of emotion judgment. Together, our results argue for a subtle and specific deficit in emotion perception in ASD that, from a signal detection perspective, is best understood as a reduced specificity due to increased noise in central processing of the face stimuli.

**Database**: Medline

**The Effects of Exercise Dose on Stereotypical Behavior in Children with Autism.**

**Author(s)**: Schmitz Olin, Stefanie; McFadden, Bridget A; Golem, Devon L; Pellegrino, Joseph K; Walker, Alan J; Sanders, David J; Arent, Shawn M

**Source**: Medicine and science in sports and exercise; May 2017; vol. 49 (no. 5); p. 983-990

**Abstract**: INTRODUCTION Autism spectrum disorder (ASD) is a prevalent neurological disorder in children characterized by restrictive, repetitive patterns of behavior that place an added burden on everyday functions. Aerobic exercise has the propensity to reduce stereotypic behaviors in children with ASD. This study sought to quantify the acute effect of exercise and to assess the influence of duration and intensity on the frequency of stereotypic behaviors in children with ASD. METHODS Participants in this study (N = 7, Mage = 13.0 ± 1.4 yr, Mheight = 1.64 ± 0.01 m, and Mweight = 60.1 ± 13.7 kg) underwent five separate days of treatments, including a control condition (C), a low-intensity 10-min condition (10L), a high-intensity 10-min condition (10H), a low-intensity 20-min condition (20L), and a high-intensity 20-min condition (20H) in which intensity was quantified using HR as well as RPE. Before and 60 min after exercise, the frequency of stereotypic behaviors was recorded. RESULTS Results indicated a reduction in behaviors in response to exercise compared with the C trial throughout all conditions except 20H. Interestingly, the most exhaustive exercise session led to increased stereotypic behaviors at all postexercise periods compared with the other exercise trials (P < 0.10). The 10L condition showed the greatest reduction at 60 min postexercise compared with the 20H or the control trial's response (P < 0.05). Examining the behavioral responses to exercise using effect sizes indicated the 10L condition showed the greatest reduction in frequency throughout all four time points (ESRange = -0.87 to -1.03) compared with baseline. CONCLUSION Although it appears high-intensity aerobic exercise may exacerbate stereotypic behaviors in children with ASD, low-to-moderate-intensity exercise produces significant and large reductions in these behaviors. This provides an easily administered and cost-effective way to positively impact these individuals.

**Database**: Medline

**Prenatal, perinatal, and postnatal factors associated with autism: A meta-analysis.**

**Author(s)**: Wang, Chengzhong; Geng, Hua; Liu, Weidong; Zhang, Guiqin

**Source**: Medicine; May 2017; vol. 96 (no. 18); p. e6696

**Abstract**: BACKGROUND The aim of this meta-analysis was to investigate the prenatal, perinatal, and postnatal risk factors for children autism. METHODS PubMed, Embase, Web of Science were used to search for studies that examined the prenatal, perinatal, and postnatal risk factors for children autism. A fixed-effects model or random-effects model was used to pool the overall effect estimates. RESULTS Data from 37,634 autistic children and 12,081,416 nonautistic children enrolled in 17 studies were collated. During the prenatal period, the factors associated with autism risk were maternal and paternal age≥35 years, mother's and father's race: White and Asian, gestational hypertension, gestational diabetes, maternal and paternal education college graduate+, threatened abortion, and antepartum hemorrhage. During perinatal period, the factors associated with autism risk were caesarean delivery, gestational age≤36 weeks, parity≥4, spontaneous labor, induced labor, no labor, breech presentation, preeclampsia, and fetal distress. During the postnatal period, the factors associated with autism risk were low birth weight, postpartum hemorrhage, male gender, and brain anomaly. Parity≥4 and female were associated with a decreased risk of autism. In addition, exposure to cigarette smoking, urinary infection, mother's and father's race: Black and Hispanic, mother's country of birth outside Europe and North America, umbilical cord around neck, premature membrane rupture, 5-minutes Apgar score<7, and respiratory infection were not associated with increased risk of autism. CONCLUSION The present meta-analysis confirmed the relation between some prenatal, perinatal, and postnatal factors with autism. All these factors were examined individually, thus it was still unclear that whether these factors are causal or play a secondary role in the development of autism. Further studies are needed to verify our findings, and investigate the effects of multiple factors on autism, rather than the single factor.

**Database**: Medline

**Complementary and Alternative Medicine in the School-Age Child With Autism.**

**Author(s)**: Nath, Debdeep
Abstract: This case study examines some common complementary and alternative treatments used in the management of behavioral and gastrointestinal symptoms associated with autism including food selectivity, abdominal pain, nausea, gastroesophageal reflux, constipation, and diarrhea. The current literature on the safety and efficacy of these treatments for pediatric patients is reviewed. This study examines therapies including gluten-free and casein-free diet, probiotics, vitamin B12, omega-3 fatty acid supplementation, chelation therapy, acupuncture, and chiropractic manipulations used in treating these core symptoms of autism.

Database: Medline

Parent-Reported Severity and Health/Educational Services Use Among US Children with Autism: Results from a National Survey.

Author(s): Zuckerman, Katharine E; Friedman, Nora D B; Chavez, Alison E; Shui, Amy M; Kuhlthau, Karen

Source: Journal of developmental and behavioral pediatrics : JDBP; May 2017; vol. 38 (no. 4); p. 260-268

Abstract: OBJECTIVE Little national data exist regarding service use patterns for children with autism spectrum disorder (ASD) of varying severity. This study aimed to assess the relationship between parent-reported severity and use of educational and health care services. METHODS Data from the 2011 Survey of Pathways to Diagnosis and Services were used to examine a nationally representative sample of 1420 US children aged 6 to 17 years with ASD, with or without developmental delay and intellectual disability. Weighted multivariable logistic regression assessed associations of parent-reported ASD severity and child sociodemographic characteristics with school-based therapy, non-school-based therapy, behavioral interventions, and specialty provider visits. RESULTS Higher parent-reported ASD severity was associated with increased likelihood of current use of school-based therapy (adjusted odds ratio [AOR] = 4.08, 95% confidence interval =1.85-8.98), non-school-based therapy (AOR = 3.60 [1.95-6.66]), and behavioral interventions (AOR = 2.30 [1.22-4.34]), as well as regular specialty provider visits (AOR = 2.99 [1.38-6.46]). Although rates of service use were generally highest among children with severe ASD, non-school-based therapy and behavioral interventions were only used by about half of children with severe ASD, and about 1 in 4 children with mild ASD were using none of the therapies asked about. CONCLUSION Parent-reported severity is associated with increased therapy and specialty provider service use among children with ASD. However, substantial variability exists in service use across levels of severity.

Database: Medline

Integration of EEG Into Psychiatric Practice: A Step Toward Precision Medicine for Autism Spectrum Disorder.

Author(s): Swatzyna, Ronald J; Tarnow, Jay D; Turner, Robert P; Roark, Alexandra J; MacInerney, Erin K; Kozlowski, Gerald P

Source: Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society; May 2017; vol. 34 (no. 3); p. 230-235

Abstract: INTRODUCTION Data from an EEG is not commonly used by psychiatrists to plan treatment and medication. However, EEG abnormalities such as isolated epileptiform discharges are found to be more prevalent in psychiatric patients, particularly those diagnosed with autism spectrum disorder (ASD). Most medications prescribed for ASD lower seizure threshold and increase side effects. Therefore, it may be prudent to order an EEG for ASD cases, especially those categorized as refractory. METHODS The data set was obtained from a multidisciplinary practice that treats a wide variety of neurotypical children and adolescent refractory patients. This study investigated 140 nonepileptic subjects diagnosed with ASD, aged 4 to 25 years. Visual inspection of the EEG was performed to search for paroxysmal, focal, or lateralizing patterns. RESULTS Of the 140 subjects, the EEG data identified 36% with isolated epileptiform discharges. The χ analysis found no significant difference between genders among the three age groups. Findings indicated a high prevalence of isolated epileptiform discharges among individuals with ASD.CONCLUSIONS Our results find that compared with the healthy population, a large number of patients with ASD have isolated epileptiform discharges despite never having a seizure. Our findings support the use of EEG in children, adolescents, and young adults with ASD, regardless of gender or age. This is particularly true for those who exhibit aggressive behaviors or those who have failed previous medication attempts with stimulants, antidepressants, and/or antipsychotics.

Database: Medline

Hybrid implementation model of community-partnered early intervention for toddlers with autism: a randomized trial.
Reduced tract integrity of the model for social communication is a neural substrate of social communication deficits in autism spectrum disorder.

Author(s): Lo, Yu-Chun; Chen, Yu-Jen; Hsu, Yung-Chin; Tseng, Wen-Yih Isaac; Gau, Susan Shur-Fen
Source: Journal of child psychology and psychiatry, and allied disciplines; May 2017; vol. 58 (no. 5); p. 576-585

Abstract: BACKGROUND Autism spectrum disorder (ASD) is a neurodevelopmental disorder with social communication deficits as one of the core symptoms. Recently, a five-level model for the social communication has been proposed in which white matter tracts corresponding to each level of the model are identified. Given that the model for social communication subserves social language functions, we hypothesized that the tract integrity of the model for social communication may be reduced in ASD, and the reduction may be related to social communication deficits. METHODS Sixty-two right-handed boys with ASD and 55 typically developing (TD) boys received clinical evaluations, intelligence tests, the Social Communication Questionnaire (SCQ), and MRI scans. Generalized fractional anisotropy (GFA) was measured by diffusion spectrum imaging to indicate the microstructural integrity of the tracts for each level of the social communication model. Group difference in the tract integrity and its relationship with the SCQ subscales of social communication and social interaction were investigated. RESULTS We found that the GFA values of the superior longitudinal fasciculus III (SLF III, level 1) and the frontal aslant tracts (FAT, level 2) were decreased in ASD compared to TD. Moreover, the GFA values of the SLF III and the FAT were associated with the social interaction subscale in ASD. CONCLUSIONS The tract integrity of the model for social communication is reduced in ASD, and the reduction is associated with impaired social interaction. Our results support that reduced tract integrity of the model for social communication might be a neural substrate of social communication deficits in ASD.

Database: Medline

Brief Report: Autism-like Traits are Associated With Enhanced Ability to Disembed Visual Forms.

Author(s): Sabatino DiCriscio, Antoinette; Troiani, Vanessa
Source: Journal of autism and developmental disorders; May 2017; vol. 47 (no. 5); p. 1568-1576

Abstract: Atypical visual perceptual skills are thought to underlie unusual visual attention in autism spectrum disorders. We assessed whether individual differences in visual processing skills scaled with quantitative traits associated with the broader autism phenotype (BAP). Visual perception was assessed using the Figure-ground subtest of the Test of visual perceptual skills-3rd Edition (TVPS). In a large adult cohort (n = 209), TVPS-Figure Ground scores were positively correlated with autistic-like social features as assessed by the Broader autism phenotype questionnaire. This relationship was gender-specific, with males showing a correspondence between visual perceptual skills and autistic-like traits. This work supports the link between atypical visual perception and autism and highlights the importance in characterizing meaningful individual differences in clinically relevant behavioral phenotypes.

Database: Medline


Author(s): Xin, Joy F; Sheppard, Mary E; Brown, Michelle
Abstract: This study examined the effect of using an iPad for students with autism spectrum disorder (ASD) on self-monitoring their behaviors in class. Four students with ASD were taught on-task behaviors by watching self-modeled video saved in the application "Choiceworks" on their iPads, and collected data on their own behaviors. A single subject research design with ABAB phases was used. Student behaviors were observed using interval recording and behavioral occurrences were compared across phases. Results showed that the participating students' on-task behaviors (e.g., facing forward, looking at teacher, i.e. eye contact, and working on the assignment) were increased when an iPad was used for their self-monitoring.

Database: Medline


Author(s): Taylor, Lauren J; Eapen, Valsamma; Maybery, Murray; Midford, Sue; Paynter, Jessica; Quarmby, Lyndsay; Smith, Timothy; Williams, Katrina; Whitehouse, Andrew J O

Abstract: Previous research shows inconsistency in clinician-assigned diagnoses of Autism Spectrum Disorder (ASD). We conducted an exploratory study that examined the concordance of diagnoses between a multidisciplinary assessment team and a range of independent clinicians throughout Australia. Nine video-taped Autism Diagnostic Observation Schedule (ADOS) assessments were collected from two Australian sites. Twenty-seven Australian health professionals each observed two video-recordings and rated the degree to which the individual met the DSM-5 criteria for ASD. There was 100% agreement on the diagnostic classification for only 3 of the 9 video clips (33%), with the remaining 6 clips (66%) reaching poor reliability. In addition, only 24% of the participating clinicians achieved 'good' or 'excellent' levels of agreement (Cohen's kappa > 0.6) with the original ASD assessment. These findings have implications for clinical guidelines for ASD assessments.

Database: Medline

Brief Report: Characteristics of preschool children with ASD vary by ascertainment.

Author(s): Sacrey, Lori-Ann R; Zwaigenbaum, Lonnie; Szatmari, Peter; Bryson, Susan; Georgiades, Stelios; Brian, Jessica; Smith, Isabel M; Vaillancourt, Tracy; Garon, Nancy; Roncadin, Caroline; Elsabbagh, Mayada

Abstract: Prospective studies of infant siblings of children diagnosed with autism spectrum disorder (ASD) provide a unique opportunity to characterize ASD as it unfolds. A critical question that remains unanswered is whether and how these children with ASD resemble other children identified from the community, including those with no family history. The purpose of this study was to compare clinical characteristics of children with ASD identified by each method (n = 86 per group), drawn from two Canadian longitudinal research cohorts. Children ascertained from a prospective cohort were less severely affected and included a larger proportion of girls, compared to the clinically referred sample. These results may have important implications for conclusions drawn from studies of high-risk and clinically referred cohorts.

Database: Medline

Brief Report: What Drives Parental Concerns About Their 18-Month-Olds at Familial Risk for Autism Spectrum Disorder?

Author(s): Karp, Elizabeth A; Ibañez, Lisa V; Warren, Zachary; Stone, Wendy L

Abstract: Parent-reported developmental concerns can be a first step toward further screening and intervention for children at risk for ASD. However, little is known about the extent to which parental well-being and child behavior contribute to parental concerns, especially in families who already have one child with ASD. This study included 54 parents and their 18-month-old high-risk toddlers to examine the extent to which parents’ well-being (i.e., parenting stress and self-efficacy), and children’s behavior (i.e., expressive language and social communication) contribute to parents' concerns regarding their toddler’s development. Results revealed that parental concerns were predicted by their own well-being as well as their toddler’s expressive language, highlighting the importance of addressing the needs of both parent and child in intervention settings.

Database: Medline
Brief Report: Meeting the Needs of Medically Hospitalized Adults with Autism: A Provider and Patient Toolkit.

Author(s): Carter, Jocelyn; Broder-Fingert, Sarabeth; Neumeyer, Ann; Giauque, Ann; Kao, Ann; Iyasere, Christiana

Source: Journal of autism and developmental disorders; May 2017; vol. 47 (no. 5); p. 1510-1529

Abstract: In an effort to meet the needs of adults with autism spectrum disorder (ASD) while hospitalized, a team of experts and providers from Massachusetts General Hospital (MGH), MGH for Children as well as parents of individuals with ASD was sparked in 2013. This became a multidisciplinary collaborative, the MGH Autism Care Collaborative, to improve adult care for inpatients with ASD. The collaborative was created with three goals in mind: (1) to educate internal medicine adult inpatient providers and staff on the unique needs of adults with ASD when hospitalized; (2) to create ASD specific resources for internal medicine adult inpatient providers; (3) to optimize patient care from admission to discharge among adults with ASD admitted to internal medicine services.

Database: Medline

Atypical Processing of Gaze Cues and Faces Explains Comorbidity between Autism Spectrum Disorder (ASD) and Attention Deficit/Hyperactivity Disorder (ADHD).

Author(s): Groom, Madeleine J; Kochhar, Puja; Hamilton, Antonia; Liddle, Elizabeth B; Simeou, Marina; Hollis, Chris

Source: Journal of autism and developmental disorders; May 2017; vol. 47 (no. 5); p. 1496-1509

Abstract: This study investigated the neurobiological basis of comorbidity between autism spectrum disorder (ASD) and attention deficit/hyperactivity disorder (ADHD). We compared children with ASD, ADHD or ADHD+ASD and typically developing controls (CTRL) on behavioural and electrophysiological correlates of gaze cue and face processing. We measured effects of ASD, ADHD and their interaction on the EDAN, an ERP marker of orienting visual attention towards a spatially cued location and the N170, a right-hemisphere lateralised ERP linked to face processing. We identified atypical gaze cue and face processing in children with ASD and ADHD+ASD compared with the ADHD and CTRL groups. The findings indicate a neurobiological basis for the presence of comorbid ASD symptoms in ADHD. Further research using larger samples is needed.

Database: Medline


Author(s): Armstrong, Rebecca; Whitehouse, Andrew J O; Scott, James G; Copland, David A; McMahon, Katie L; Fleming, Sophie; Arnott, Wendy

Source: Journal of autism and developmental disorders; May 2017; vol. 47 (no. 5); p. 1478-1489

Abstract: The current study examined the relationship between early language ability and autistic-like traits in adulthood, utilising data from 644 participants from a longitudinal study of the general population. Language performance at 2 years was measured with the Language Development Survey (LDS), and at 20 years the participants completed the Autism-Spectrum Quotient (AQ). Vocabulary size at 2 years was negatively associated with Total AQ score, as well as scores on the Communication, and Social Skills subscales. Adults who had been late talkers were also more likely to have 'high' scores on the Communication subscale. This is the first study to show an association between early language ability and autistic-like traits in adulthood.

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**Autism West Midlands Newsletter May 2017**

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Outreach/Training Librarian
Andrew Hough
Andrew.hough@covwarkpt.nhs.uk

<table>
<thead>
<tr>
<th>Health Sciences Library</th>
<th>Manor Court Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caludon Centre, Clifford Bridge Road, Coventry</td>
<td>Jepson House, Nuneaton</td>
</tr>
<tr>
<td>Tel. 02476 967928</td>
<td>Tel:02476 321 561</td>
</tr>
<tr>
<td><a href="mailto:caludon.library@covwarkpt.nhs.uk">caludon.library@covwarkpt.nhs.uk</a></td>
<td><a href="mailto:manorcourt.library@covwarkpt.nhs.uk">manorcourt.library@covwarkpt.nhs.uk</a></td>
</tr>
<tr>
<td>Library Assistant: Lynne Kimberley</td>
<td>Library Assistant: Janine Patrick</td>
</tr>
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<tr>
<th>Brian Oliver Centre Library</th>
<th>Education Centre Library</th>
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<tbody>
<tr>
<td>Brooklands, Marston Green, Solihull</td>
<td>St Michael’s Hospital, Warwick</td>
</tr>
<tr>
<td>Tel. 0121 329 4923</td>
<td>Tel. 01926 406749</td>
</tr>
<tr>
<td><a href="mailto:brooklands.library@covwarkpt.nhs.uk">brooklands.library@covwarkpt.nhs.uk</a></td>
<td><a href="mailto:stmichaels.library@covwarkpt.nhs.uk">stmichaels.library@covwarkpt.nhs.uk</a></td>
</tr>
<tr>
<td>Library Assistant: Denise Howell</td>
<td>Library Assistant: Claire Bradley</td>
</tr>
</tbody>
</table>

http://cwpt.wordpress.ptfs-europe.co.uk