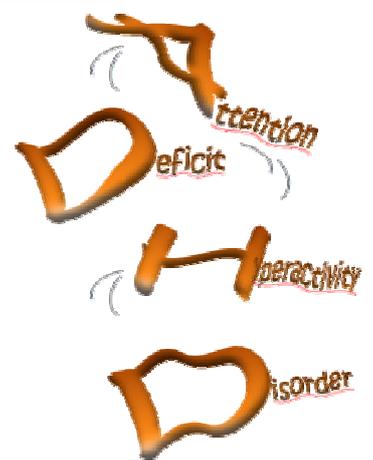


# NEWSLETTER



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## **BIBLIOGRAFIA ADHD MAGGIO 2014**

Acta Paediatr. 2014 May.

**CENTRAL NERVOUS SYSTEM PROCESSING OF EMOTIONS IN CHILDREN WITH NOCTURNAL ENURESIS AND ATTENTION DEFICIT HYPERACTIVITY DISORDER.**

***Equit M, Becker A, El KD, et al.***

**AIM:** Nocturnal enuresis (NE) and attention deficit hyperactivity disorder (ADHD) are common in childhood. We analysed the central processing of emotions in children with NE, ADHD, NE+ADHD and controls.

**METHODS:** We examined 13 children with NE, 13 with ADHD, 14 with NE+ADHD and 14 controls. Acoustic evoked potentials were recorded using standardised methodology. For the event-related potentials, positive, negative, neutral pictures were presented and time intervals of 250-450ms, 450-650ms and 650-850ms evaluated. Hypotheses were tested with repeated-measurement analyses of variance.

**RESULTS:** In the frontal region, children with NE showed more intense responses to positive and negative pictures than controls measured with event-related potentials. Viewing positive pictures, children with NE+ADHD differed from children with ADHD in the central and parietal and for all types of stimuli in the parietal region. Children with NE+ADHD elicited the strongest responses. Children with ADHD did not differ from controls. There was an unspecific interaction effect of the acoustic evoked potentials in children with NE compared to the controls.

**CONCLUSION:** Children with NE processed emotions differently from children with ADHD and controls. Children with NE+ADHD processed emotions the most intense, displaying interaction effects of the central nervous system that cannot be explained by each disorder alone.

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Per la ricerca degli articoli pubblicati nella letteratura scientifica nel mese in esame sono state consultate le banche dati Medline, Embase, PsycINFO e PsycArticle utilizzando le seguenti parole chiave (o i loro sinonimi): 'Attention deficit disorder', 'Attention deficit hyperactivity disorder', 'Infant', 'Child', 'Adolescent', 'Human'. Sono qui riportate le referenze considerate rilevanti e pertinenti.

Am J Occup Ther. 2014 May;68:260-67.

**EFFECTIVENESS OF COGNITIVE-FUNCTIONAL (COG-FUN) OCCUPATIONAL THERAPY INTERVENTION FOR YOUNG CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER: A CONTROLLED STUDY.**

**Maeir A, Fisher O, Bar-Ilan RT, et al.**

**OBJECTIVE.** The purpose of this study was to examine the effectiveness of the Cognitive-Functional (Cog-Fun) intervention for young children with attention deficit hyperactivity disorder (ADHD).

**METHOD.** Nineteen children ages 5-7 yr diagnosed with ADHD were allocated to treatment and wait-list control groups. After the 12-wk intervention, the control group was crossed over to treatment. Follow-up was conducted 3 mo after treatment. Outcome measures included the Behavior Rating Inventory of Executive Function and the Canadian Occupational Performance Measure.

**RESULTS.** Before crossover, significant differences were found between groups in change scores on the outcome measures. After crossover, no significant differences were found in treatment effects, and significant moderate to large treatment effects were found for both COPM and BRIEF scores. Treatment gains were maintained at follow-up.

**CONCLUSION.** The study supports the effectiveness of the Cog-Fun intervention in improving occupational performance and executive functions in daily life for young children with ADHD.

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Arch Dis Child. 2014 May.

**INATTENTION IN VERY PRETERM CHILDREN: IMPLICATIONS FOR SCREENING AND DETECTION.**

**Brogan E, Cragg L, Gilmore C, et al.**

**OBJECTIVE:** Children born very preterm (VP; <32 weeks) are at risk for attention deficit/hyperactivity disorders (ADHD). ADHD in VP children have a different clinical presentation to ADHD in the general population, and therefore VP children with difficulties may not come to the teacher's attention in school. We have assessed ADHD symptoms to determine whether VP children's difficulties may go undetected in the classroom.

**DESIGN:** Parents and teachers of 117 VP and 77 term-born children completed the Strengths and Difficulties Questionnaire to assess hyperactivity/inattention, emotional, conduct and peer problems, and the Du Paul ADHD Rating Scale-IV to assess inattention and hyperactivity/impulsivity symptoms. Special Educational Needs (SEN) were assessed using teacher report. Group differences in outcomes were adjusted for socio-economic deprivation.

**RESULTS:** Parents and teachers rated VP children with significantly higher mean Strengths and Difficulties Questionnaire hyperactivity/inattention scores, and parents rated them with more clinically significant hyperactivity/inattention difficulties than term-born controls (Relative Risk (RR) 4.0; 95% CI 1.4 to 11.4). Examining ADHD dimensions, parents and teachers rated VP children with significantly more inattention symptoms than controls, and parents rated them with more clinically significant inattention (RR 4.8; 95% CI 1.4 to 16.0); in contrast, there was no excess of hyperactivity/impulsivity. After excluding children with SEN, VP children still had significantly higher inattention scores than controls but there was no excess of hyperactivity/impulsivity.

**CONCLUSIONS:** VP children are at greater risk for symptoms of inattention than hyperactivity/impulsivity. Inattention was significantly increased among VP children without identified SEN suggesting that these problems may be difficult to detect in school. Raising teachers' awareness of inattention problems may be advantageous in enabling them to identify VP children who may benefit from intervention.

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Asia Pac Psychiatry. 2014 Jun;6:207-16.

**STRESS AMONG PARENTS OF CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER, A MALAYSIAN EXPERIENCE.**

**Narkunam N, Hashim AH, Sachdev MK, et al.**

**INTRODUCTION:** Attention deficit hyperactivity disorder (ADHD) is a chronic debilitating illness with onset in early childhood. The objective of this study was to look at the impact of children with ADHD on their parents.

**METHODS:** All parents with children diagnosed as having ADHD attending the Psychiatry Adolescent and Child Unit, University Malaya were included in this study. Their parenting stress was assessed using the Parent Stress Index.

**RESULTS:** A total of 95 parents participated in the study. The proportion of parents who reported significant stress in this study was much higher than in most studies (n=69, 73%). Significant correlation was found between the severity of the child's disorder (Children's Global Assessment Scale [CGAS] score) and the parents' stress level (OR 0.16, 95% CI 0.05-0.51). Mothers were significantly more stressed than fathers (OR 0.16, 95% CI 0.05-0.51) and non-Malay parents more stressed than the Malay parents (OR 3.92, 95% CI 1.29-11.94). Parents with children older than 12 years of age were six times more stressed than parents with children younger than 12 years old (OR 6.47, 95% CI 1.55-27.01). Stressed parents acknowledged that having a child with ADHD was their biggest worry.

**DISCUSSION:** Stress has marked consequences on any person and has important bearings on their mental health. Stress among parents needs be looked into when treating children with ADHD.

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Asian J Psychiatr. 2014 Jun;9:87-88.

**DURATION OF UNTREATED ILLNESS AND EARLY TREATMENT RESPONSE IN CHILDREN WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER - A PRELIMINARY STUDY.**

**Srinivasaraghavan R, Kattimani S, Mahadevan S.**

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Breastfeed Med. 2014 May.

**BREASTFEEDING AND PARAFUNCTIONAL ORAL HABITS IN CHILDREN WITH AND WITHOUT ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Sabuncuoğlu O, Orengül C, Bıkmazer A, et al.**

**Abstract Introduction:** Although children with attention-deficit/hyperactivity disorder (ADHD) were reported to have insufficient breastfeeding, consequences and oropharyngeal implications of this finding have not been studied. In this case-control study, we aimed to investigate early feeding practices and parafunctional oral habits in children with ADHD.

**Subjects and Methods:** The study group consisted of 200 children and adolescents, 7-17 years old, diagnosed as having ADHD at Marmara University Child Psychiatry Clinics in Istanbul, Turkey. The Conners Parent and Teacher Rating Scales were used to assess behavioral disturbances. A questionnaire was developed consisting of items pertaining to breastfeeding period, early feeding history, and parafunctional oral habits. The study data were compared with those for 175 healthy schoolchildren after exclusion of possible ADHD cases.

**Results:** The children with ADHD were found to have insufficient exclusive breastfeeding (less than 6 months) (p=0.0001). The children with insufficient exclusive breastfeeding were more likely to have a history of bottle feeding, longer duration of bottle feeding, and early introduction of bottle feeding (p=0.01). Overall, significant differences were detected on the domains of duration of bottle feeding, introduction of bottle feeding, introduction of pacifier use, variables of nail and toenail biting, as well as pencil biting, bruxism, and snoring between the ADHD group and the control group.

**Conclusions:** The present results indicate that early in life, children with ADHD are subject to insufficient exclusive breastfeeding, different feeding practices, and elevated parafunctional oral habits more often than

typically developing children. For all professionals who provide healthcare to children, increased awareness and attention to these factors are suggested.

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Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement. 2014 Apr;46:147-61.

**LES COGNITIONS SOCIALES DES PARENTS D'ENFANTS TDA/H COMME PRÉDICTEUR DES PRATIQUES PARENTALES APRÈS UNE INTERVENTION.**

**Beaulieu MC, Normandeau S, Robaey P.**

The purpose of this study was to examine the association between cognitions of parents of ADHD children about their child's behaviour (self-efficacy, causal attributions) and their parental practices following an intervention (parent training program [PTP], support phone call [SPC]) in comparison with a control group (CG). Families were randomly assigned to either PTP (n=35), SPC (n=29) or CG (n=34). All the children were under medication. The social cognitions were measured with questionnaires (self-efficacy and causal attributions for the child's misbehaviour (parent's lack of abilities, parent's bad mood, parent's lack of effort)). Parental practices were measured by two types of instruments (self-report and observations of parent-child interactions). Multiple regressions indicated that to in some instances parental self-efficacy and causal attributions were predictors of parenting practices after the intervention. However it would be premature to conclude to the moderating role of social cognitions with regard to parenting practices following an intervention. Clinical implications of these results are explored in the discussion.

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Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement. 2014 Apr;46:107-16.

**ABORD DÉVELOPPEMENTAL DU TDAH: EFFICACITÉ D'UN PROGRAMME D'ENTRAÎNEMENT AUX HABILITÉS PARENTALES.**

**Hauth-Charlier S, Clément C.**

In addition to the triad of hyperactivity, impulsivity and inattention, children and adolescents with ADHD frequently exhibit defiant and disruptive behaviours. These behaviours constitute the targets of the Behavioural Parent Training (BPT). This study evaluates the effectiveness of these program for 25 families of children and adolescents with attention deficit/hyperactivity disorder (AD/HD) (mean age = 10.6 years). During 10 sessions of Group BPT, therapists teach parents appropriate procedures to manage their child's maladaptive behaviours. According to a dimensional approach, the frequency and intensity of disruptive behaviours are measured using Barkley's home situation questionnaire before and after the BPT, and compared to a control population. The main results show a decrease in the intensity of disruptive behaviours in children and adolescents with AD/HD and a diminution of problematic situations for teenagers. Moreover, after the BPT, the frequency and intensity of disruptive behaviours of children and adolescents with AD/HD tend to be closer to those presented by a control population. This study validates the effectiveness of this BPT with an AD/HD population and the understanding of this disorder as developmental.

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Child Adolesc Psychiatry Ment Health. 2014;8:15.

**PREDICTING AGGRESSION IN CHILDREN WITH ADHD.**

**Ercan E, Ercan ES, Atilgan H, et al.**

**OBJECTIVE:** The present study uses structural equation modeling of latent traits to examine the extent to which family factors, cognitive factors and perceptions of rejection in mother-child relations differentially correlate with aggression at home and at school.

**METHODS:** Data were collected from 476 school-age (7-15 years old) children with a diagnosis of ADHD who had previously shown different types of aggressive behavior, as well as from their parents and

teachers. Structural equation modeling was used to examine the differential relationships between maternal rejection, family, cognitive factors and aggression in home and school settings.

**RESULTS:** Family factors influenced aggression reported at home (.68) and at school (.44); maternal rejection seems to be related to aggression at home (.21). Cognitive factors influenced aggression reported at school (-.05) and at home (-.12).

**CONCLUSIONS:** Both genetic and environmental factors contribute to the development of aggressive behavior in ADHD. Identifying key risk factors will advance the development of appropriate clinical interventions and prevention strategies and will provide information to guide the targeting of resources to those children at highest risk.

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Child Care Health Dev. 2014 May;40:301-08.

**PAEDIATRICIANS' DECISION MAKING ABOUT PRESCRIBING STIMULANT MEDICATIONS FOR CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Chow SJ, Sciberras E, Gillam LH, et al.**

**BACKGROUND:** Attention-deficit/hyperactivity disorder (ADHD) is now the most common reason for a child to present to a paediatrician in Australia. Stimulant medications are commonly prescribed for children with ADHD, to reduce symptoms and improve function. In this study we investigated the factors that influence paediatricians' decisions about prescribing stimulant medications.

**METHOD:** In-depth, semi-structured interviews were conducted with paediatricians (n=13) who were purposively recruited so as to sample a broad demographic of paediatricians working in diverse clinical settings. Paediatricians were recruited from public outpatient and private paediatrician clinics in Victoria, Australia. The interviews were audio-recorded and transcribed verbatim for thematic analysis. Paediatricians also completed a questionnaire describing their demographic and practice characteristics.

**RESULTS:** Our findings showed that the decision to prescribe is a dynamic process involving two key domains: (1) weighing up clinical factors; and (2) interacting with parents and the patient along the journey to prescribing. Five themes relating to this process emerged from data analysis: comprehensive assessments that include history, examination and information from others; influencing factors such as functional impairment and social inclusion; previous success; facilitating parental understanding including addressing myths and parental confusion; and decision-making model.

**CONCLUSIONS:** Paediatricians' decisions to prescribe stimulant medications are influenced by multiple factors that operate concurrently and interdependently. Paediatricians do not make decisions about prescribing in isolation; rather, they actively involve parents, teachers and patients, to arrive at a collective, well-informed decision.

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Child Psychiatry Hum Dev. 2014 Jun;45:329-37.

**THE PREDICTIVE UTILITY OF CONDUCT DISORDER SYMPTOMS IN PRESCHOOL CHILDREN: A 3-YEAR FOLLOW-UP STUDY.**

**Rolon-Arroyo B, Arnold DH, Harvey EA.**

Conduct disorder (CD) symptoms often emerge during the preschool years, but it is not clear whether they predict later symptoms. The present study examined whether age 3 CD symptoms predict age 6 CD symptoms beyond oppositional defiant disorder (ODD) and attention-deficit/hyperactivity disorder-hyperactive/impulsive (ADHD-HI) symptoms. Participants were 216 preschool children (M Age = 44.19 months), including an externalizing sample (n=161) and a comparison group (n=55). Parents were administered a diagnostic interview when children were 3 years old and again 3 years later. The externalizing sample exhibited more CD symptoms than the comparison sample. In the externalizing sample, initial CD symptoms predicted later CD symptoms above and beyond ODD and ADHD HI symptoms; this relation was stronger for boys than for girls. Stealing, property destruction, and fighting independently predicted later CD symptoms. CD symptoms also predicted subsequent ADHD HI symptoms

and predicted ODD symptoms at a level that approached significance. Results support the predictive validity of CD symptoms in preschool.

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Clin Child Fam Psychol Rev. 2014 Jun;17:157-72.

**CO-OCCURRING AGGRESSIVE AND DEPRESSIVE SYMPTOMS AS RELATED TO OVERESTIMATIONS OF COMPETENCE IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Jiang Y, Johnston C.**

Research indicates that on average, children with attention-deficit/hyperactivity disorder (ADHD) overestimate their competence in various domains. ADHD also frequently co-occurs with disorders involving aggressive and depressive symptoms, which themselves seem to influence estimations of self-competence in social, academic, and behavioral domains. In particular, high levels of aggressive behavior are generally associated with overestimations of competence, and high levels of depressive symptoms are related to underestimations of competence. This paper reviews studies of overestimations of competence among children with ADHD and examines the extent to which comorbid aggressive or depressive symptoms may be influencing these estimates. Although significant challenges arise due to limited information regarding comorbidities and problematic methods used to assess overestimations of competence, existing evidence suggests that ADHD may be associated with overestimations of competence over and above co-occurring aggression. As well, studies suggest that comorbid depression may reduce the appearance of overestimations of competence in children with ADHD. Underlying mechanisms (e.g., neuropsychological deficits or self-protection) of overestimations in children with ADHD are discussed, each with particular clinical implications for the assessment and treatment of ADHD. Future research would do well to carefully consider and explicitly describe the comorbid aggressive and depressive characteristics among individuals with ADHD when overestimations of competence are examined.

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Clinical Linguistics & Phonetics. 2014 May;28:346-65.

**A CROSS-ETIOLOGY COMPARISON OF THE SOCIO-EMOTIONAL BEHAVIORAL PROFILES ASSOCIATED WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND SPECIFIC LANGUAGE IMPAIRMENT.**

**Redmond SM, Ash AC.**

Cross-etiology comparisons provide important information that can help practitioners establish criteria for differential diagnosis and tailor interventions towards the source of children's difficulties. This study examined the extent to which parent rating scales of socioemotional behavioral difficulties differentiate cases of attention-deficit/hyperactivity disorder (ADHD) from cases of specific language impairment (SLI), and typical development (TD). Parents of 60 children (7–8 years) completed the Child Behavior Checklist (Achenbach & Rescorla, 2001) and the Conners Parent Rating Scale-Revised (Conners, 2004). Significant differences were observed between ratings provided for the children with ADHD and the children with SLI and TD across several scales which assessed behavioral and emotional difficulties. Most of the observed differences between ratings provided for the SLI and TD groups were not significant when nonverbal IQ was treated as a covariate or when syndrome scales were adjusted for the presence of language and academic items. In contrast, these adjustments had little impact on observed differences between the children with ADHD and the other groups. These results highlight important and clinically useful differences between the scope and the scale of socioemotional behavior difficulties associated with ADHD and SLI.

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Cogn Affect Behav Neurosci. 2014 May.

**IMPAIRED REWARD PROCESSING BY ANTERIOR CINGULATE CORTEX IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.**

**Umemoto A, Lukie CN, Kerns KA, et al.**

Decades of research have examined the neurocognitive mechanisms of cognitive control, but the motivational factors underlying task selection and performance remain to be elucidated. We recently proposed that anterior cingulate cortex (ACC) utilizes reward prediction error signals carried by the midbrain dopamine system to learn the value of tasks according to the principles of hierarchical reinforcement learning. According to this position, disruption of the ACC-dopamine interface can disrupt the selection and execution of extended, task-related behaviors. To investigate this issue, we recorded the event-related brain potential (ERP) from children with attention deficit hyperactivity disorder (ADHD), which is strongly associated with ACC-dopamine dysfunction, and from typically developing children while they navigated a simple "virtual T-maze" to find rewards. Depending on the condition, the feedback stimuli on each trial indicated that the children earned or failed to earn either money or points. We found that the reward positivity, an ERP component proposed to index the impact of dopamine-related reward signals on ACC, was significantly larger with money feedback than with points feedback for the children with ADHD, but not for the typically developing children. These results suggest that disruption of the ACC-dopamine interface may underlie the impairments in motivational control observed in childhood ADHD.

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Dev Neuropsychol. 2014;39:302-15.

**EXECUTIVE FUNCTIONS IN PRESCHOOL CHILDREN WITH ADHD AND DBD: AN 18-MONTH LONGITUDINAL STUDY.**

**Schoemaker K, Bunte T, Espy KA, et al.**

In this longitudinal study, we examined the stability of the association between executive functions and externalizing behavior problems, and the developmental change of executive functions in a predominately clinically diagnosed preschool sample (N = 200). Inhibition and working memory performance were assessed three times in 18 months. Across time, poorer inhibition performance in young children was associated with attention deficit hyperactivity disorder (ADHD) and disruptive behavior disorders (DBD), and poorer working memory performance was associated with ADHD. Inhibition and working memory performance increased over time, especially in the early preschool period. The improvement of inhibition performance was more pronounced in the clinically diagnosed children compared to the TD children.

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Environ Res. 2014 May;132C:342-49.

**PARAOXONASE I POLYMORPHISMS AND ATTENTION/HYPERACTIVITY IN SCHOOL-AGE CHILDREN FROM MEXICO CITY, MEXICO.**

**Fortenberry GZ, Meeker JD, Sanchez BN, et al.**

Globally, organophosphate (OP) pesticide usage and exposure is widespread. Studies have found that fetuses and infants are more sensitive than adults to environmental toxicants and that prenatal exposure to low levels of OPs has been associated with Attention Deficit Hyperactivity Disorder-Like Phenotypes (ADHD-LP). Paraoxonase 1 (PON1) is an enzyme involved in detoxifying some OPs and its polymorphisms influence enzyme activity and quantity. The objective of this study was to examine whether maternal and/or child PON1 genotypes (PON1R192Q and PON1L55M) were associated with ADHD-LP in a Mexico City, Mexico birth cohort. PON1R192Q and PON1L55M genotypes in mothers (PON1R192Q: N=531; PON1L55M: N=458) and children (PON1R192Q: N=532; PON1L55M: N=478) from blood DNA were determined. We assessed ADHD-LP for children between the ages of 6 and 13 using Conners Parent Rating Scales-Revised (CRS-R), Conners Continuous Performance Test (CPT), and the parent scores for Behavior Assessment System for Children-2 (BASC2). Multivariable linear regression models were used to test relationships between ADHD-LP and PON1 polymorphisms. In these models, significant associations were observed with maternal genotypes but not with the child genotypes. A higher DSM IV Hyperactivity/Impulsivity score (beta=3.27 points; 95% CI (0.89, 5.65)) and a 2.17 higher score in child

DSM IV Total (95% CI (0.05, 4.29)) were observed for maternal PON155MM in comparison to PON155LM+LL. The child attention problems score was 2.27 points higher (95% CI (0.002, 4.53) for maternal PON1192QQ in comparison to PON1192QR+RR. Because maternal PON1 polymorphisms were associated with child ADHD-LP, this may be a viable biomarker of susceptibility for ADHD-LP.

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Eur Child Adolesc Psychiatry. 2014 May.

**PATERNAL INFLUENCES ON TREATMENT OUTCOME OF BEHAVIORAL PARENT TRAINING IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

***van den Hoofdakker BJ, Hoekstra PJ, van d, V, et al.***

This study aims to explore the influence of paternal variables on outcome of behavioral parent training (BPT) in children with attention-deficit/hyperactivity disorder (ADHD). 83 referred, school-aged children with ADHD were randomly assigned to BPT plus ongoing routine clinical care (RCC) or RCC alone. Treatment outcome was based on parent-reported ADHD symptoms and behavioral problems. Moderator variables included paternal ADHD symptoms, depressive symptoms, and parenting self-efficacy. We conducted repeated measures analyses of variance (ANOVA) for all variables, and then analyzed the direction of interaction effects by repeated measures ANOVA in high and low scoring subgroups. Paternal ADHD symptoms and parenting self-efficacy played a moderating role in decreasing behavioral problems, but not in decreasing ADHD symptoms. Paternal depressive symptoms did not moderate either treatment outcome. BPT is most beneficial in reducing children's behavioral problems when their fathers have high levels of ADHD symptoms or high-parenting self-efficacy.

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Eur Child Adolesc Psychiatry. 2014 May.

**JUSTICE AND REJECTION SENSITIVITY IN CHILDREN AND ADOLESCENTS WITH ADHD SYMPTOMS.**

***Bondu R, Esser G.***

Justice sensitivity captures individual differences in the frequency with which injustice is perceived and the intensity of emotional, cognitive, and behavioral reactions to it. Persons with ADHD have been reported to show high justice sensitivity, and a recent study provided evidence for this notion in an adult sample. In 1,235 German 10-to 19-year olds, we measured ADHD symptoms, justice sensitivity from the victim, observer, and perpetrator perspective, the frequency of perceptions of injustice, anxious and angry rejection sensitivity, depressive symptoms, conduct problems, and self-esteem. Participants with ADHD symptoms reported significantly higher victim justice sensitivity, more perceptions of injustice, and higher anxious and angry rejection sensitivity, but significantly lower perpetrator justice sensitivity than controls. In latent path analyses, justice sensitivity as well as rejection sensitivity partially mediated the link between ADHD symptoms and comorbid problems when considered simultaneously. Thus, both justice sensitivity and rejection sensitivity may contribute to explaining the emergence and maintenance of problems typically associated with ADHD symptoms, and should therefore be considered in ADHD therapy.

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Eur Child Adolesc Psychiatry. 2014 May.

**NONVERBAL INTELLIGENCE IN YOUNG CHILDREN WITH DYSREGULATION: THE GENERATION R STUDY.**

***Basten M, Van Der Ende J, Tiemeier H, et al.***

Children meeting the Child Behavior Checklist Dysregulation Profile (CBCL-DP) suffer from high levels of co-occurring internalizing and externalizing problems. Little is known about the cognitive abilities of these children with CBCL-DP. We examined the relationship between CBCL-DP and nonverbal intelligence. Parents of 6,131 children from a population-based birth cohort, aged 5 through 7 years, reported problem behavior on the CBCL/1.5-5. The CBCL-DP was derived using latent profile analysis on the CBCL/1.5-5 syndrome scales. Nonverbal intelligence was assessed using the Snijders Oomen Nonverbal Intelligence Test 2.5-7-Revised. We examined the relationship between CBCL-DP and nonverbal intelligence using

linear regression. Analyses were adjusted for parental intelligence, parental psychiatric symptoms, socio-economic status, and perinatal factors. In a subsample with diagnostic interview data, we tested if the results were independent of the presence of attention deficit hyperactivity disorder (ADHD) or autism spectrum disorders (ASD). The results showed that children meeting the CBCL-DP (n = 110, 1.8 %) had a 11.0 point lower nonverbal intelligence level than children without problems and 7.2-7.3 points lower nonverbal intelligence level than children meeting other profiles of problem behavior (all p values <0.001). After adjustment for covariates, children with CBCL-DP scored 8.3 points lower than children without problems (p < 0.001). The presence of ADHD or ASD did not account for the lower nonverbal intelligence in children with CBCL-DP. In conclusion, we found that children with CBCL-DP have a considerable lower nonverbal intelligence score. The CBCL-DP and nonverbal intelligence may share a common neurodevelopmental etiology.

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Eur Child Adolesc Psychiatry. 2014 May;23:257-71.

**RECOGNITION OF FACIAL EMOTION AND AFFECTIVE PROSODY IN CHILDREN WITH ASD (+ADHD) AND THEIR UNAFFECTED SIBLINGS.**

**Oerlemans AM, van der Meer JM, Van Steijn DJ, et al.**

Autism is a highly heritable and clinically heterogeneous neuropsychiatric disorder that frequently co-occurs with other psychopathologies, such as attention-deficit/hyperactivity disorder (ADHD). An approach to parse heterogeneity is by forming more homogeneous subgroups of autism spectrum disorder (ASD) patients based on their underlying, heritable cognitive vulnerabilities (endophenotypes). Emotion recognition is a likely endophenotypic candidate for ASD and possibly for ADHD. Therefore, this study aimed to examine whether emotion recognition is a viable endophenotypic candidate for ASD and to assess the impact of comorbid ADHD in this context. A total of 90 children with ASD (43 with and 47 without ADHD), 79 ASD unaffected siblings, and 139 controls aged 6-13 years, were included to test recognition of facial emotion and affective prosody. Our results revealed that the recognition of both facial emotion and affective prosody was impaired in children with ASD and aggravated by the presence of ADHD. The latter could only be partly explained by typical ADHD cognitive deficits, such as inhibitory and attentional problems. The performance of unaffected siblings could overall be considered at an intermediate level, performing somewhat worse than the controls and better than the ASD probands. Our findings suggest that emotion recognition might be a viable endophenotype in ASD and a fruitful target in future family studies of the genetic contribution to ASD and comorbid ADHD. Furthermore, our results suggest that children with comorbid ASD and ADHD are at highest risk for emotion recognition problems.

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European Child & Adolescent Psychiatry. 2014 Apr;23:197-205.

**INFLUENCE OF ASSESSMENT INSTRUMENT ON ADHD DIAGNOSIS.**

**Posserud MB, Ullerbø AK, Plessen KJ, et al .**

We compared four instruments commonly used to screen for and diagnose Attention-Deficit/Hyperactivity Disorder (ADHD) in children. The Bergen Child Study included a DSM-IV ADHD symptom list and the Strengths and Difficulties Questionnaire (SDQ) as screen in Phase one. Phase two included the parent Development and Well-Being Assessment (DAWBA), whereas Phase three comprised in-depth clinical assessment, including the Schedule for Affective Disorders and Schizophrenia for School Aged Children (K-SADS). We compared ADHD as diagnosed by the four instruments in the children with normal intellectual functioning participating in all three phases (N=234). The DSM-IV ADHD symptom list showed moderate agreement with all other instruments (?=0.53–0.57), whereas there was fair agreement between the K-SADS-DAWBA (?=0.31) and between SDQ–DAWBA (?=0.33). The DAWBA diagnosed fewer children with ADHD than did the other instruments. Implications for use of the instruments are discussed.

Front Hum Neurosci. 2014;8:268.

**THE CO-OCCURRENCE OF AUTISM AND ATTENTION DEFICIT HYPERACTIVITY DISORDER IN CHILDREN - WHAT DO WE KNOW?**

**Leitner Y.**

Symptoms of attention deficit hyperactivity disorder (ADHD) and autistic spectrum disorder (ASD) often co-occur. The DSM-IV had specified that an ASD diagnosis is an exclusion criterion for ADHD, thereby limiting research of this common clinical co-occurrence. As neurodevelopmental disorders, both ASD and ADHD share some phenotypic similarities, but are characterized by distinct diagnostic criteria. The present review will examine the frequency and implications of this clinical co-occurrence in children, with an emphasis on the available data regarding pre-school age. The review will highlight possible etiologies explaining it, and suggest future research directions necessary to enhance our understanding of both etiology and therapeutic interventions, in light of the new DSM-V criteria, allowing for a dual diagnosis.

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Front Hum Neurosci. 2014;8:321.

**WHAT FUTURE RESEARCH SHOULD BRING TO HELP RESOLVING THE DEBATE ABOUT THE EFFICACY OF EEG-NEUROFEEDBACK IN CHILDREN WITH ADHD.**

**Vollebregt MA, Van Dongen-Boomsma M, Slaats-Willemse D, et al.**

In recent years a rising amount of randomized controlled trials, reviews, and meta-analyses relating to the efficacy of electroencephalographic-neurofeedback (EEG-NF) in children with attention-deficit/hyperactivity disorder (ADHD) have been published. Although clinical reports and open treatment studies suggest EEG-NF to be effective, double blind placebo-controlled studies as well as a rigorous meta-analysis failed to find support for the efficacy of EEG-NF. Since absence of evidence does not equate with evidence of absence, we will outline how future research might overcome the present methodological limitations. To provide conclusive evidence for the presence or absence of the efficacy of EEG-NF in the treatment of ADHD, there is a need to set up a well-designed study that ensures optimal implementation and embedding of the training, and possibly incorporates different forms of neurofeedback.

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Int J Neuropsychopharmacol. 2014 Jul;17:1063-82.

**POLYPHARMACY WITH ANTIDEPRESSANTS IN CHILDREN AND ADOLESCENTS.**

**Diaz-Caneja CM, Espliego A, Parellada M, et al.**

The aim of this study was to review current epidemiological data on the use of antidepressants in co-prescription with other psychotropic drugs in children and adolescents, as well as available efficacy and safety information. A Medline search from inception until February 2012 was performed to identify epidemiological and clinical studies, reviews and reports containing potentially relevant information on polypharmacy with antidepressants in young people. There has been an increase in polypharmacy in children and adolescents involving antidepressants in recent years. Antidepressants have become one of the drug classes most frequently prescribed in combination and are commonly co-prescribed with stimulants and antipsychotics. Most information regarding efficacy and safety of polypharmacy patterns was provided by case series and open-label studies. Efficacy studies gave some support for the use of a combination of antidepressants and antipsychotics in the management of refractory obsessive-compulsive disorder and some residual symptoms in major depressive disorder. Even less empirical support was found for a combination of stimulants and antidepressants in co-morbid attention deficit hyperactivity disorder and mood or anxiety disorders. Adverse events were similar to those found with individual medication groups, with severe adverse events mostly reported by individual case reports. The use of polypharmacy with antidepressants has become a regular practice in clinical settings. Although there is still little efficacy and safety information, preliminary evidence points to the potential clinical usefulness of some polypharmacy

patterns. Further research on patients with co-morbidities or more severe conditions is needed, in order to improve knowledge of this issue

J Abnorm Child Psychol. 2014 May.

**LATENT PROFILE ANALYSIS OF WORKING MEMORY PERFORMANCE IN A SAMPLE OF CHILDREN WITH ADHD.**

**Gomez R, Gomez RM, Winther J, et al.**

The current study used latent profile analysis (LPA) to ascertain distinct groups of children with ADHD (N=701) in terms of performance on working memory (WM) tasks that tapped visuospatial sketchpad, spatial central executive, and verbal central executive functions. It compared the WM performances of these classes with a clinical comparison group (N=59). The participants' age ranged from 7 to 16 years (586 males, 71 females). The results of the LPA supported three classes. For all three WM tasks, class 1 (N=196) had more difficulties than classes 2 (N=394) and 3 (N=111), and the clinical comparison group. Class 2 had more difficulties than class 3 and the clinical comparison group, and there was no difference between class 3 and the clinical comparison group. Class 1 had lower IQ and academic abilities, and relatively more individuals with depressive disorders. The implications of the findings for understanding ADHD and its treatment are discussed.

J Abnorm Psychol. 2014 May;123:362-74.

**THE ROLE OF EARLY CHILDHOOD ADHD AND SUBSEQUENT CD IN THE INITIATION AND ESCALATION OF ADOLESCENT CIGARETTE, ALCOHOL, AND MARIJUANA USE.**

**Sibley MH, Pelham WE, Molina BS, et al.**

Adolescents with attention deficit/hyperactivity disorder (ADHD) are at an increased risk for substance use but the pathways through which this risk emerges are insufficiently understood. Tobacco, alcohol, and marijuana outcomes were compared between adolescents diagnosed with ADHD in early childhood (N = 113) and demographically similar controls (N=65). Participants were assessed from age 5 until age 18. A comprehensive history of adolescent substance use was compiled for each participant and growth in ADHD and conduct disorder (CD) were modeled as they related to substance use outcomes. Results indicated that when compared with controls, adolescents with ADHD were more likely to try cigarettes, initiate alcohol use at early ages, and smoke marijuana more frequently. Furthermore, adolescents with ADHD were 4 to 5 times more likely than controls to escalate to heavy cigarette and marijuana use after trying these substances once. Adolescents with ADHD who escalated to heavy use patterns were more likely to display early cigarette use and marked problems with family members, but displayed fewer peer problems. There was evidence of baseline effects (latent intercept, measured at age 5) for both ADHD and CD on substance use outcomes. Furthermore, growth in ADHD symptoms accounted for much of the growth in CD symptoms, and consequently, escalating CD symptoms in childhood (latent slope) were viewed as a mediator of the relationship between ADHD and cigarette and marijuana use. Maternal drinking in early childhood was the strongest predictor of early adolescent alcohol use. These findings are discussed with respect to the role of ADHD in the development of adolescent risk outcomes.

J Am Acad Child Adolesc Psychiatry. 2014 Jun;53:647-57.

**MAINTENANCE OF EFFICACY OF LISDEXAMFETAMINE DIMESYLATE IN CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: RANDOMIZED-WITHDRAWAL STUDY DESIGN.**

**Coghill DR, Banaschewski T, Lecendreux M, et al.**

**OBJECTIVE:** In this phase 3 extension study, the long-term maintenance of efficacy of lisdexamfetamine dimesylate (LDX) in children and adolescents with attention-deficit/hyperactivity disorder (ADHD) was evaluated using a randomized-withdrawal study design.

**METHOD:** European and US patients (6-17 years; N=276) with ADHD were entered into a 26-week open-label trial of LDX treatment. Those who completed the open-label period (n = 157) were randomized 1:1 to their optimized dose of LDX (30, 50, or 70 mg per day) or placebo for a 6-week randomized-withdrawal period (RWP). The primary efficacy measure was the proportion of patients meeting treatment failure criteria ( $\geq 50\%$  increase in ADHD Rating Scale IV total score and  $\geq 2$ -point increase in Clinical Global Impressions-Severity of Illness [CGI-S] score, compared with RWP start point). Safety and tolerability were also evaluated.

**RESULTS:** During the RWP (LDX, n=78; placebo, n=79), significantly fewer patients receiving LDX met treatment failure criteria (15.8%) compared with those receiving placebo (67.5%; difference = -51.7%; 95% confidence interval = -65.0, -38.5;  $p < .001$ ). Most treatment failures occurred at or before the week 2 visit after randomization. Treatment-emergent adverse events were reported in 39.7% and 25.3% of patients receiving LDX and placebo, respectively, during the RWP.

**CONCLUSIONS:** These data demonstrate the maintenance of efficacy of LDX during long-term treatment in children and adolescents with ADHD. The rapid return of symptoms on LDX withdrawal demonstrates the need for continuing treatment. The safety profile of LDX was consistent with that of other stimulants. Clinical trial registration information-Double-Blind, Placebo-Controlled, Randomized Withdrawal, Extension, Safety and Efficacy Study of LDX in Children and Adolescents Aged 6-17; <http://clinicaltrials.gov/NCT00784654>.

J Atten Disord. 2014 May.

**USE OF MULTIPLE INFORMANTS TO IDENTIFY CHILDREN AT HIGH RISK FOR ADHD IN TURKISH SCHOOL-AGE CHILDREN.**

**Guler AS, Scahill L, Jeon S, et al.**

**Objective:** To examine the distribution of parent- and teacher-rated ADHD symptoms in a Turkish community sample to identify children at high risk for ADHD and to explore the psychosocial correlates of these high-risk children.

**Method:** An 18-item SNAP-IV (Swanson, Nolan, and Pelham) and a three-item impairment scale were completed by parents and teachers on 3,110 children between 7 and 14 years of age from three public schools in Istanbul.

**Results:** Using various case definitions for ADHD, we observed a range of prevalence estimates based on parent (2.7%-9.6%) and teacher (2%-10.1%) reports. Teacher-identified ADHD was associated with low family income and low parental education; parent-identified ADHD was associated with perceived need for mental health treatment.

**Conclusion:** Statistically driven threshold on a symptom scale may overestimate the rate of high-risk children. Relying on one informant is likely to miss some children at high risk. As in clinical practice, therefore, data from multiple informants and evidence of impairment are essential for identifying ADHD.

J Atten Disord. 2014 May;18:286-93.

**WORKING MEMORY IN ADHD: A COMPARISON OF BRITISH AND SOUTH AFRICAN CHILDREN.**

**Alloway TP, Cockcroft K.**

**OBJECTIVE:** The aim of the present study was to investigate the following issues: (a) Do students with ADHD have a pervasive pattern of impaired working memory skills across verbal and visuospatial domains? (b) is there evidence for a similar pattern of deficits across U.K. and South African students? and (c) which working memory tasks can effectively identify students with ADHD from TD peers?

**METHOD:** Four groups of children participated in the study: students with ADHD and TD from the United Kingdom and students with ADHD and TD from South Africa.

**RESULTS:** There were several key findings. First, the students with ADHD in South Africa performed significantly worse than the other groups (ADHD-United Kingdom, TD-United Kingdom, and TD-South Africa) in verbal and visuospatial short-term memory measures. Next, students with ADHD in the United

Kingdom and South Africa exhibited working memory deficits extended to the visuospatial domain. This pattern was consistent with previous research in developmental populations (Alloway et al., 2006) and in adult samples (Kane et al., 2004; Park et al., 2002). A related finding was that the memory deficits in the students with ADHD (in the United Kingdom and South Africa) were significantly worse than their TD counterparts even when IQ and age were statistically accounted. These persistent deficits fit well accumulating evidence of the importance of working memory in learning.

**CONCLUSION:** Practical implications for education will be discussed in the context of appropriate diagnosis and support in the classroom.

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J Atten Disord. 2014 May.

**EFFECTS OF PHYSICAL ACTIVITY INTERVENTION ON MOTOR PROFICIENCY AND PHYSICAL FITNESS IN CHILDREN WITH ADHD: AN EXPLORATORY STUDY.**

*Pan CY, Chang YK, Tsai CL, et al.*

**OBJECTIVE:** This study explored how a 12-week simulated developmental horse-riding program (SDHRP) combined with fitness training influenced the motor proficiency and physical fitness of children with ADHD.

**METHOD:** Twelve children with ADHD received the intervention, whereas 12 children with ADHD and 24 typically developing (TD) children did not. The fitness levels and motor skills of the participants were assessed using standardized tests before and after the 12-week training program.

**RESULTS:** Significant improvements were observed in the motor proficiency, cardiovascular fitness, and flexibility of the ADHD training group following the intervention.

**CONCLUSION:** Children with ADHD exhibit low levels of motor proficiency and cardiovascular fitness; thus, using the combined 12-week SDHRP and fitness training positively affected children with ADHD.

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J Autism Dev Disord. 2014 May;44:1064-76.

**THE RECIPROCAL RELATIONSHIP OF ASD, ADHD, DEPRESSIVE SYMPTOMS AND STRESS IN PARENTS OF CHILDREN WITH ASD AND/OR ADHD.**

*Van Steijn DJ, Oerlemans AM, van Aken MA, et al.*

This study investigated the role of parental Autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD), and depressive symptoms on parenting stress in 174 families with children with ASD and/or ADHD, using generalized linear models and structural equation models. Fathers and mothers reported more stress when parenting with their child with ASD and/or ADHD than when parenting with the unaffected sibling; they also experienced more stress than a norm population. Depressive symptoms were most pronounced in the parents of children with ASD and ASD+ADHD. Spouse correlations were found for ASD, depression, and parenting stress. Paternal ASD and maternal ADHD symptoms were related to increased parenting stress, and parental ADHD symptoms with depressive symptoms and parenting stress. The results highlight the increased burden of raising a child with ASD and/or ADHD and the reciprocal relationship this has with parents' ASD, ADHD, and depressive symptoms, and levels of stress.

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J Can Acad Child Adolesc Psychiatry. 2014 May;23:128-35.

**CHILDHOOD ADHD AND ADDICTIVE BEHAVIOURS IN ADOLESCENCE: A CANADIAN SAMPLE.**

*Ostojic D, Charach A, Henderson J, et al.*

**OBJECTIVE:** To compare rates of early addictive behaviours in a clinic sample of youth with childhood attention-deficit/hyperactivity disorder (ADHD) with those in community populations.

**METHOD:** We surveyed 142 adolescents (14.1 +/- 1.14 years), diagnosed with ADHD before age 12, about early substance use and problem gambling using questions from two cross-sectional population studies: the Canadian National Longitudinal Survey of Children and Youth, Ontario subsample, (N=1,317; 10-15 years) and the Ontario Student Drug Use and Health Survey (N=9,288; 12-18 years).

**RESULTS:** The ADHD sample reported using cigarettes, 17.8% (95% CI 12.1-25.5), alcohol, 27.1% (20.1-35.5), cannabis, 14.2% (8.9-21.7), at a similar or lower rate than the NLSCY (cigarettes, 28.3% (25.8-30.9), alcohol, 28.6% (26.0-31.3), cannabis, 16.5% (14.0-19.4), and OSDUHS samples (cigarettes, 21.9% (20.2-23.7), alcohol, 58.6% (56.0-61.2), cannabis, 26.0% (23.9-28.2). With regards to gambling, there is a non-significant trend for ADHD youth to report gambling more frequently than the provincial average, 7.9% (3.3-17.9) vs. 4.3% (2.9-6.3).

**CONCLUSIONS:** Our findings support the emerging literature that youth diagnosed with ADHD in childhood may not be at greater risk for onset of substance use in early adolescence. The study identified two areas that warrant further investigation in this population; the possible increased risk for substance use among females and a trend toward early onset of gambling behaviours.

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J Child Adolesc Psychopharmacol. 2014 May;24:223-27.

**THE METABOTROPIC GLUTAMATE RECEPTOR SUBTYPE 7 RS3792452 POLYMORPHISM IS ASSOCIATED WITH THE RESPONSE TO METHYLPHENIDATE IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Park S, Kim BN, Cho SC, et al.**

**Abstract Objective:** The purpose of this study was to investigate the association between the metabotropic glutamate receptor subtype 7 (mGluR7) gene (GRM7) polymorphism and treatment response to methylphenidate in Korean children with attention-deficit/hyperactivity disorder (ADHD).

**Methods:** We enrolled 175 medication-naïve children with ADHD in an open-label 8 week trial of methylphenidate. The participants were genotyped and evaluated using the Clinical Global Impressions (CGI) Scale and the parent version of the ADHD Rating Scale-IV (ADHD-RS) before and after treatment.

**Results:** After the 8 week course of methylphenidate, children with the GRM7 rs37952452 polymorphism G/A genotype had a more pronounced response rate to the treatment than did children with the G/G genotype according to the ADHD-RS scores (72.2% vs. 55.4%, respectively;  $p=0.011$ ) and the more stringent standard of combined ADHD-RS and CGI-Improvement (CGI-I) scores (50.0% vs. 35.3%, respectively;  $p=0.044$ ).

**Conclusions:** The present study suggests that the GRM7 rs37952452 polymorphism may play a role in the treatment response to methylphenidate in children with ADHD. Further studies to evaluate the association between glutamate genes and treatment response to methylphenidate in children with ADHD, including a replication of our findings using a control or comparative group in a larger sample, are warranted.

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J Child Adolesc Psychopharmacol. 2014 May.

**PERIOD PREVALENCE OF CONCOMITANT PSYCHOTROPIC MEDICATION USAGE AMONG CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER DURING 2009.**

**Betts KA, Sikirica V, Hodgkins P, et al.**

**Abstract Objective:** Stimulants are recommended as a first-line treatment for attention-deficit/hyperactivity disorder (ADHD); however, a subset of the patient population augments their stimulant treatment with other medications. The objective of this study was to estimate the 1 year period prevalence of concomitant psychotropic medication use among children and adolescents with ADHD during 2009.

**Methods:** Patients 6-17 years of age with one or more primary ADHD diagnoses between July 1, 2008 and December 31, 2009 and one or more stimulant prescription fills during 2009 were identified from a large United States commercial claims database. Concomitant psychotropic medication use, defined as 30 days of continuous medication supply overlap between the augmenting agent and stimulant, was evaluated for 14 distinct psychotropic medication categories (6 with a United States Food and Drug Administration (FDA) approved indication for ADHD, 8 without an indication for ADHD). The 1 year period prevalence of concomitant psychotropic medication use (both overall and within each medication category) was calculated and compared between patients with and without psychiatric or neurologic comorbidities. Children (6-12 years) and adolescents (13-17 years) were evaluated separately.

**Results:** A total of 71,201 children and 49,959 adolescents met the inclusion criteria. The 1 year period prevalence of concomitant psychotropic medication use among children and adolescents was 20.3% and 23.4%, with 5.7% and 6.7% augmenting with two or more medication categories, respectively. The most common concomitant medication categories were selective serotonin reuptake inhibitors (SSRIs) (children: 6.2%; adolescents: 11.4%), atypical antipsychotics (5.8%; 6.8%) and clonidine immediate release (5.4%; 2.9%). Children and adolescents with psychiatric or neurologic comorbidities had higher rates of augmentation than did those without comorbidities (all  $p < 0.001$ ).

**Conclusions:** This epidemiologic study found that the prevalence of concomitant psychotropic medication use in children and adolescents ranged from 12.6% for noncomorbid ADHD to 41.7% for comorbid ADHD, in 2009. Future research is warranted to evaluate the rationale for, and clinical benefit of, concomitant psychotropic medication usage in patients with ADHD.

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J Child Psychol Psychiatry. 2014 Jun;55:582-610.

**ANNUAL RESEARCH REVIEW: THE NEUROBEHAVIORAL DEVELOPMENT OF MULTIPLE MEMORY SYSTEMS - IMPLICATIONS FOR CHILDHOOD AND ADOLESCENT PSYCHIATRIC DISORDERS.**

**Goodman J, Marsh R, Peterson BS, et al.**

Extensive evidence indicates that mammalian memory is organized into multiple brain systems, including a 'cognitive' memory system that depends on the hippocampus and a stimulus-response 'habit' memory system that depends on the dorsolateral striatum. Dorsal striatal-dependent habit memory may in part influence the development and expression of some human psychopathologies, particularly those characterized by strong habit-like behavioral features. The present review considers this hypothesis as it pertains to psychopathologies that typically emerge during childhood and adolescence. These disorders include Tourette syndrome, attention-deficit/hyperactivity disorder, obsessive-compulsive disorder, eating disorders, and autism spectrum disorders. Human and nonhuman animal research shows that the typical development of memory systems comprises the early maturation of striatal-dependent habit memory and the relatively late maturation of hippocampal-dependent cognitive memory. We speculate that the differing rates of development of these memory systems may in part contribute to the early emergence of habit-like symptoms in childhood and adolescence. In addition, abnormalities in hippocampal and striatal brain regions have been observed consistently in youth with these disorders, suggesting that the aberrant development of memory systems may also contribute to the emergence of habit-like symptoms as core pathological features of these illnesses. Considering these disorders within the context of multiple memory systems may help elucidate the pathogenesis of habit-like symptoms in childhood and adolescence, and lead to novel treatments that lessen the habit-like behavioral features of these disorders.

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J Child Psychol Psychiatry. 2014 May.

**A DIFFUSION MODELING APPROACH TO UNDERSTANDING CONTEXTUAL CUEING EFFECTS IN CHILDREN WITH ADHD.**

**Weigard A, Huang-Pollock C.**

**BACKGROUND:** Strong theoretical models suggest implicit learning deficits may exist among children with Attention Deficit Hyperactivity Disorder (ADHD).

**METHOD:** We examine implicit contextual cueing (CC) effects among children with ADHD ( $n=72$ ) and non-ADHD Controls ( $n=36$ ).

**RESULTS:** Using Ratcliff's drift diffusion model, we found that among Controls, the CC effect is due to improvements in attentional guidance and to reductions in response threshold. Children with ADHD did not show a CC effect; although they were able to use implicitly acquired information to deploy attentional focus, they had more difficulty adjusting their response thresholds.

**CONCLUSIONS:** Improvements in attentional guidance and reductions in response threshold together underlie the CC effect. Results are consistent with neurocognitive models of ADHD that posit subcortical dysfunction but intact spatial attention, and encourage the use of alternative data analytic methods when dealing with reaction time data.

J Child Psychol Psychiatry. 2014 May;55:428-35.

**FAMILY INCOME IN EARLY CHILDHOOD AND SUBSEQUENT ATTENTION DEFICIT/HYPERACTIVITY DISORDER: A QUASI-EXPERIMENTAL STUDY.**

**Larsson H, Sariaslan A, Langstrom N, et al.**

**BACKGROUND:** Studies have found negative associations between socioeconomic position and attention deficit/hyperactivity disorder (ADHD), but it remains unclear if this association is causal. The aim of this study was to determine the extent to which the association between family income in early childhood and subsequent ADHD depends on measured and unmeasured selection factors.

**METHODS:** A total of 811,803 individuals born in Sweden between 1992 and 2000 were included in this nationwide population-based cohort study. Diagnosis of ADHD was assessed via the Swedish national Patient Register and the Swedish Prescribed Drug Register. Annual family income during offspring's first 5 years in life was collected prospectively from the Swedish Integrated Database for Labour Market Research and divided into quartiles by (lower) family disposable income. We predicted ADHD from family income while controlling for covariates and also comparing differently exposed cousins and siblings to control for unmeasured familial confounding.

**RESULTS:** The crude analyses suggested that children exposed to lower income levels were at increased risk for ADHD (HRQ uartile1 = 2.52; 95% CI, 2.42-2.63; HRQ uartile2 = 1.52; 95% CI, 1.45-1.58; HRQ uartile3 = 1.20; 95% CI, 1.14-1.15). This dose-dependent association decreased after adjustment for measured covariates (HRQ uartile1 = 2.09; 95% CI, 2.00-2.19; HRQ uartile2 = 1.36; 95% CI, 1.30-1.42; HRQ uartile3 = 1.13; 95% CI, 1.08-1.18). Although the association was attenuated in cousin comparisons (HRQ uartile1 = 1.61; 95% CI, 1.40-1.84; HRQ uartile2 = 1.28; 95% CI, 1.12-1.45; HRQ uartile3 = 1.14; 95% CI, 1.01-1.28) and sibling comparison models (HRQ uartile1 = 1.37; 95% CI, 1.07-1.75; HRQ uartile2 = 1.37; 95% CI, 1.12-1.68; HRQ uartile3 = 1.23; 95% CI, 1.04-1.45), it remained statistically significant across all levels of decreased disposable family income.

**CONCLUSIONS:** Our results indicated that low family income in early childhood was associated with increased likelihood of ADHD. The link remained even after controlling for unmeasured selection factors, highlighting family income in early childhood as a marker of causal factors for ADHD.

J Child Psychol Psychiatry. 2014 May;55:460-72.

**DOES EEG-NEUROFEEDBACK IMPROVE NEUROCOGNITIVE FUNCTIONING IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER? A SYSTEMATIC REVIEW AND A DOUBLE-BLIND PLACEBO-CONTROLLED STUDY.**

**Vollebregt MA, Van Dongen-Boomsma M, Buitelaar JK, et al.**

**BACKGROUND:** The number of placebo-controlled randomized studies relating to EEG-neurofeedback and its effect on neurocognition in attention-deficient/hyperactivity disorder (ADHD) is limited. For this reason, a double blind, randomized, placebo-controlled study was designed to assess the effects of EEG-neurofeedback on neurocognitive functioning in children with ADHD, and a systematic review on this topic was performed.

**METHODS:** Forty-one children (8-15 years) with a DSM-IV-TR diagnosis of ADHD were randomly allocated to EEG-neurofeedback or placebo-neurofeedback treatment for 30 sessions, twice a week. Children were stratified by age, electrophysiological state of arousal, and medication use. Neurocognitive tests of attention, executive functioning, working memory, and time processing were administered before and after treatment. Researchers, teachers, children and their parents, with the exception of the neurofeedback-therapist, were all blind to treatment assignment. Outcome measures were the changes in neurocognitive performance before and after treatment.

**Clinical trial registration:** www.clinicaltrials.gov: NCT00723684.

**RESULTS:** No significant treatment effect on any of the neurocognitive variables was found. A systematic review of the current literature also did not find any systematic beneficial effect of EEG-neurofeedback on neurocognitive functioning.

**CONCLUSION:** Overall, the existing literature and this study fail to support any benefit of neurofeedback on neurocognitive functioning in ADHD, possibly due to small sample sizes and other study limitations.

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J Clin Exp Neuropsychol. 2014 Jun;1-15.

**A LONGITUDINAL STUDY OF NEUROPSYCHOLOGICAL FUNCTIONING AND ACADEMIC ACHIEVEMENT IN CHILDREN WITH AND WITHOUT SIGNS OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Rennie B, Beebe-Frankenberg M, Swanson HL.**

**Objective:** Attention-deficit/hyperactivity disorder (ADHD) in childhood is associated with poor academic functioning. Deficits in academic functioning have proven to be less responsive to intervention than behavioral deficits in this population, yet the causes of this academic underperformance are not well understood. The purpose of this study is to examine the relationship between ADHD and academic performance in elementary-aged children in a developmental context. To do this, we study important cognitive variables and academic achievement over a three-year timeframe.

**Method:** Based on teacher ratings of ADHD, children were divided into a high symptom group (n=17) and a low symptom group (n=34). A thorough battery of cognitive and academic tests was administered at Time 1 and again 2 years later. Cognitive measures focused specifically on working memory and response inhibition.

**Results:** Results indicate that children who have high levels of ADHD signs differ from their low-sign peers in academic achievement and in several cognitive domains. Differences in cognitive functioning show a developmental trend consistent with earlier developmental delays in response inhibition and later delays in working memory. Working memory appears to be particularly important in several academic domains. Importantly, in a longitudinal model, working memory was more predictive of math achievement for students demonstrating signs of ADHD than for those who did not.

**Conclusion:** The relationship between these cognitive variables and academic functioning are explicated in the domains of reading, math, and problem solving.

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J Neurodev Disord. 2014;6:11.

**MOTOR FUNCTION AND PERCEPTION IN CHILDREN WITH NEUROPSYCHIATRIC AND CONDUCT PROBLEMS: RESULTS FROM A POPULATION BASED TWIN STUDY.**

**Gustafsson P, Kerekes N, Anckarsater H, et al.**

**BACKGROUND:** Children with early symptomatic psychiatric disorders such as Attention-Deficit/Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD) have been found to have high rates of motor and/or perception difficulties. However, there have been few large-scale studies reporting on the association between Conduct Disorder (CD) and motor/perception functions. The aim of the present study was to investigate how motor function and perception relate to measures of ADHD, ASD, and CD.

**METHODS:** Parents of 16,994 Swedish twins (ages nine and twelve years) were interviewed using the Autism-Tics, ADHD and other Comorbidities inventory (A-TAC), which has been validated as a screening instrument for early onset child psychiatric disorders and symptoms. Associations between categorical variables of scoring above previously validated cut-off values for diagnosing ADHD, ASD, and CD on the one hand and motor and/or perception problems on the other hand were analysed using cross-tabulations, and the Fisher exact test. Associations between the continuous scores for ADHD, ASD, CD, and the subdomains Concentration/Attention, Impulsiveness/Activity, Flexibility, Social Interaction and Language, and the categorical factors age and gender, on the one hand, and the dependent dichotomic variables Motor control and Perception problems, on the other hand, were analysed using binary logistic regression in general estimated equation models.

**RESULTS:** Male gender was associated with increased risk of Motor control and/or Perception problems. Children scoring above the cut-off for ADHD, ASD, and/or CD, but not those who were 'CD positive' but 'ADHD/ASD negative', had more Motor control and/or Perception problems, compared with children who were screen-negative for all three diagnoses. In the multivariable model, CD and Impulsiveness/Activity had no positive associations with Motor control and/or Perception problems.

**CONCLUSIONS:** CD symptoms or problems with Impulsiveness/Activity were associated with Motor control or Perception problems only in the presence of ASD symptoms and/or symptoms of inattention. Our results indicate that children with CD but without ASD or inattention do not show a deviant development of motor and perceptual functions. Therefore, all children with CD should be examined concerning motor control and perception. If problems are present, a suspicion of ADHD and/or ASD should be raised.

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J Obsessive Compuls Relat Disord. 2014 Jan;3:6-11.

**HOARDING BEHAVIOR AMONG YOUNG CHILDREN WITH OBSESSIVE-COMPULSIVE DISORDER.**

**Frank H, Stewart E, Walther M, et al.**

Previous research has shown that among the various subtypes of obsessive-compulsive disorder (OCD), adults (e.g. Frost, Krause & Steketee, 1996) and older children and adolescents (Bloch et al., 2009; Storch et al., 2007) with problematic hoarding have distinct features and a poor treatment prognosis. However, there is limited information on the phenomenology and prevalence of hoarding behaviors in young children. The present study characterizes children ages 10 and under who present with OCD and hoarding behaviors. Sixty-eight children received a structured interview-determined diagnosis of OCD. Clinician administered, parent-report, and child-report measures on demographic, symptomatic, and diagnostic variables were completed. Clinician ratings of hoarding symptoms and parent and child endorsement of the hoarding item on the CY-BOCS checklist (Scahill, Riddle, McSwiggin-Hardin, & Ort, 1997) determined inclusion in the hoarding group (n=33). Compared to children without hoarding symptoms (n=35), the presence of hoarding symptoms was associated with an earlier age of primary diagnosis onset and a higher proportion of ADHD and provisional anxiety diagnoses. These results are partially consistent with the adult literature and with findings in older children (Storch et al., 2007). Additional data on clinical presentation and phenomenology of hoarding are needed to form a developmentally appropriate definition of the behavior.

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J Pediatr. 2014 May;164:1157-64.

**COMMON WHITE MATTER MICROSTRUCTURE ALTERATIONS IN PEDIATRIC MOTOR AND ATTENTION DISORDERS.**

**Langevin LM, MacMaster FP, Crawford S, et al.**

**OBJECTIVE:** To characterize white matter alterations in children with isolated or concurrent developmental coordination disorder and/or attention-deficit/hyperactivity disorder (ADHD) compared with typically-developing controls, and to determine whether group differences on motor and attention tasks could be explained by differences in diffusion tensor imaging (DTI) measures.

**STUDY DESIGN:** In a cohort of children (n=85) with developmental coordination disorder, ADHD, or combined developmental coordination disorder+ADHD, we examined 3 major white matter tracts involved in attention and motor processes. Using DTI, the corpus callosum, superior longitudinal fasciculus, and cingulum were analyzed with respect to measures of white matter integrity. Differences in fractional anisotropy (FA), mean diffusivity, radial diffusivity, and axial diffusivity were analyzed using ANOVA. Motor and attentional functioning was assessed using standardized tests, and correlated to DTI measures.

**RESULTS:** FA reductions were noted in the frontal regions of the corpus callosum for children with ADHD (P=.039), whereas children with developmental coordination disorder displayed similar reductions in regions of the corpus callosum underlying parietal brain regions (P=.040), as well as the left superior longitudinal fasciculus (P=.026). White matter integrity was impacted in both frontal and parietal regions for children with comorbid developmental coordination disorder+ADHD (P=.029; .046). FA was positively correlated with scores on both motor and attentional assessments in a region-specific manner.

**CONCLUSION:** Our findings suggest that alterations in the corpus callosum underlie difficulties in motor and attention functioning. These changes are functionally and regionally distinct and could reflect a neurobiological basis for motor and attention disorders in children.

J Psychiatr Pract. 2014 May;20:169-77.

**CHILDHOOD ADHD: A STEPPED DIAGNOSIS APPROACH.**

**Batstra L, Nieweg EH, Pijl S, et al.**

Since publication of DSM-IV in 1994, the prevalence of parent-reported diagnosed attention deficit/hyperactivity disorder (ADHD) has tripled to more than 10% of children. Although it is hard to know for sure whether ADHD is overdiagnosed, underdiagnosed, or misdiagnosed, it is argued that ADHD is especially prone to diagnostic inflation and overdiagnosis. Therefore, we propose a model of stepped diagnosis for childhood ADHD, which may reduce overdiagnosis without risking undertreatment. Calling attention to stepped diagnosis and formalizing the steps may improve its application in clinical practice.

Journal of Attention Disorders. 2014 Apr;18:226-35.

**LANGUAGE PROFILES AND MENTAL HEALTH PROBLEMS IN CHILDREN WITH SPECIFIC LANGUAGE IMPAIRMENT AND CHILDREN WITH ADHD.**

**Helland WA, Helland T, Heimann M.**

**Objective:** This study aimed to explore whether children with specific language impairment (SLI) and children with ADHD can be differentiated from each other in terms of their language profiles, and also to investigate whether these two clinical groups differ regarding mental health problems.

**Method:** A total of 59 children in the age range 6 to 12 years participated in the study. The parents completed the Children's Communication Checklist–Second Edition and the Strengths and Difficulties Questionnaire.

**Results:** Communication impairments were as prominent in the ADHD group as in the SLI group; however, the groups were separable from each other in terms of their language profiles. Furthermore, the ADHD group experienced significantly more mental health problems compared with the SLI group.

**Conclusion:** Language should be assessed in children with ADHD and instruments sensitive to ADHD should be included when assessing children with SLI. Mental health should be an area of concern to be addressed in both groups.

Journal of Attention Disorders. 2014 Apr;18:202-11.

**CATECHOL-O-METHYLTRANSFERASE GENE AND EXECUTIVE FUNCTION IN CHILDREN WITH ADHD.**

**Choudhry Z, Sengupta S, Thakur G, et al.**

**Objective:** To examine the association between functional haplotypes in the catechol-o-methyltransferase (COMT) gene and ADHD diagnosis, and executive function (EF) in children with ADHD.

**Method:** COMT single nucleotide polymorphism (SNPs; rs6269, rs4633, rs4818, and rs4680) were genotyped in 445 ADHD children. EF was assessed using Wisconsin Card Sorting Test (WCST), Tower of London, and self-ordered pointing task. COMT haplotypes were tested for association using family-based association testing (fBAT) and quantitative trait analyses.

**Results:** fBAT analysis showed no association between COMT alleles/haplotypes and ADHD diagnosis and EF parameters. Using ANCOVA in the Caucasian only sample, significant associations between COMT haplotypes, and WCST indices were observed. However, after correction for multiple testing, the only significant effect observed was between rs6269 and the number of categories completed (a measure of concept formation ability) on the WCST,  $F(1,285) = 8.92$ ,  $p = .003$ .

**Conclusion:** These results tentatively implicate COMT gene in modulating EF in children with ADHD.

Journal of Attention Disorders. 2014 Apr;18:212-25.

**ADOLESCENT AND CAREGIVER REPORTS OF ADHD SYMPTOMS AMONG INNER-CITY YOUTH: AGREEMENT, PERCEIVED NEED FOR TREATMENT, AND BEHAVIORAL CORRELATES.**

**Hogue A, Dauber S, Lichvar E, et al.**

**Objective:** This study investigated adolescent and caregiver reports of ADHD symptoms in a sample of clinically referred inner-city adolescents.

**Method:** Participants (N=168) included youth ages 12-18 (54% male, 98% ethnic minority) and their caregivers who each completed diagnostic interviews of ADHD symptoms and assessments of perceived need for ADHD treatment and correlated behavior problems.

**Results:** Informants showed poor agreement on DSM-IV diagnostic categories and also dimensional scales, Inattention/Disorganization (I/D) and Hyperactivity/Impulsivity (H/I). Both caregiver and adolescent reports of I/D symptoms, but not H/I symptoms, were related to perceived need for ADHD treatment. Caregiver reports were linked to behavioral correlates typically associated with ADHD: I/D symptoms correlated with planning/organization and socioemotional deficits, and H/I symptoms correlated with externalizing and behavior regulation deficits. In contrast, adolescent reports of I/D were related to internalizing and externalizing problems, and their reports of H/I correlated with externalizing only. Few gender effects were found.

**Conclusion:** Study results underscore the developmental salience of I/D symptoms and have implications for ADHD diagnosis and treatment planning for adolescents.

Journal of Attention Disorders. 2014 Apr;18:242-46.

**ADHD PREVALENCE IN LEBANESE SCHOOL-AGE POPULATION.**

**Richa S, Rohayem J, Chammai R, et al.**

**Objective:** The authors conducted an epidemiological study in Lebanon to estimate ADHD prevalence in school-age population.

**Method:** They selected 1,000 children aged between 6 and 10 years, admitted in several schools in Lebanon. In each district, they randomly chose five schools, and in each school two classes. From each class, 10 children were included randomly in the population of the study. For each child, an ADHD-Rating Scale–IV School version was filled by a main teacher. The Home version was filled by the child's parents.

**Results:** The prevalence of ADHD Inattentive subtype was 3 per 1,000, Hyperactive-Impulsive subtype 12 per 1,000, and ADHD Combined subtype 17 per 1,000. ADHD was significantly more prevalent in boys than in girls.

**Conclusion:** This is the first epidemiological study to be conducted in Lebanon to estimate the prevalence of ADHD among children.

Journal of Attention Disorders. 2014 Apr;18:258-67.

**NEURAL CORRELATES OF FORETHOUGHT IN ADHD.**

**Poissant H, Mendrek A, Senhadji N.**

**Objective:** The purpose of the present investigation was to delineate the neural correlates of forethought in the ADHD children relative to typically developing (TD) children.

**Method:** In all, 21 TD and 23 ADHD adolescents underwent functional magnetic resonance imaging (fMRI) while performing a forethought task. The participants had to identify congruent and incongruent stimuli from cartoon stories representing sequences of action.

**Results:** The findings revealed significantly greater activation in the bilateral prefrontal cortex (PFC) in TD versus ADHD children, and more activation in the cerebellar vermis in the adolescents with ADHD versus TD, during performance of the incongruent relative to congruent condition.

**Conclusion:** The inverse pattern of activation of the PFC and the cerebellar vermis in both groups could reflect a compensatory role played by the cerebellum or suggest the malfunction of the neural network between those regions in ADHD. Further research of the neural correlates of forethought in ADHD is warranted.

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Journal of Attention Disorders. 2014 Apr;18:179-85.

**IS THE DIAGNOSIS OF ADHD INFLUENCED BY TIME OF ENTRY TO SCHOOL? AN EXAMINATION OF CLINICAL, FAMILIAL, AND FUNCTIONAL CORRELATES IN CHILDREN AT EARLY AND LATE ENTRY POINTS.**

**Biederman J, Petty CR, Fried R, et al.**

**Objective:** The authors examined the proposed immaturity hypothesis, which suggests that younger children may have developmental immaturity and not ADHD, using data from a large, clinically referred population of individuals with and without ADHD.

**Method:** The sample consisted of individuals with and without an ADHD diagnosis, ascertained from ongoing studies in our laboratory, born in August (Younger Cohort N=562) and born in September (Older Cohort N=529). The authors compared studywide diagnosis rates of ADHD, ADHD familiarity patterns, ADHD symptoms, psychiatric comorbidity, and functional impairments between the two cohorts.

**Results:** Studywide rates of ADHD diagnosis, ADHD-associated symptoms, ADHD-associated impairments, ADHD-associated comorbid disorders, and familiarity were similar in the two age cohorts.

**Conclusion:** Results showed that ADHD-associated familial, clinical, and functional correlates are similar irrespective of age at entry to school, indicating that when ADHD symptoms are present, a diagnosis of ADHD should be considered rather than attributing these symptoms to developmental immaturity.

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Journal of Child Psychology and Psychiatry. 2014 Apr;55:384-92.

**ASSOCIATIONS BETWEEN BIRTH WEIGHT AND ATTENTION-DEFICIT/HYPERACTIVITY DISORDER SYMPTOM SEVERITY: INDIRECT EFFECTS VIA PRIMARY NEUROPSYCHOLOGICAL FUNCTIONS.**

**Hatch B, Healey DM, Halperin JM.**

**Background:** Attention-deficit/hyperactivity disorder (ADHD) has a range of aetiological origins which are associated with a number of disruptions in neuropsychological functioning. This study aimed to examine how low birth weight, a proxy measure for a range of environmental complications during gestation, predicted ADHD symptom severity in preschool-aged children indirectly via neuropsychological functioning.

**Methods:** A total of 197 preschool-aged children were recruited as part of a larger longitudinal study. Two neuropsychological factors were derived from NEPSY domain scores. One, referred to as 'Primary Neuropsychological Function,' was loaded highly with Sensorimotor and Visuospatial scores. The other, termed 'Higher-Order Function' was loaded highly with Language and Memory domain scores. Executive functioning split evenly across the two. Analyses examined whether these neuropsychological factors allowed for an indirect association between birth weight and ADHD symptom severity.

**Results:** As both factors were associated with symptom severity, only the Primary Neuropsychological Factor was associated with birth weight. Furthermore, birth weight was indirectly associated to symptom severity via this factor.

**Conclusions:** These data indicate that birth weight is indirectly associated with ADHD severity via disruption of neuropsychological functions that are more primary in function as opposed to functions that play a higher-order role in utilising and integrating the primary functions.

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Journal of Child Psychology and Psychiatry. 2014 Apr;55:328-36.

**THE GLOBAL BURDEN OF CONDUCT DISORDER AND ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN 2010.**

**Erskine HE, Ferrari AJ, Polanczyk GV, et al.**

**Objective:** The Global Burden of Disease Study 2010 (GBD 2010) is the first to include conduct disorder (CD) and attention-deficit/hyperactivity disorder (ADHD) for burden quantification.

**Method:** A previous systematic review pooled the available epidemiological data for CD and ADHD, and predicted prevalence by country, region, age and sex for each disorder. Prevalence was then multiplied by a disability weight to calculate years lived with disability (YLDs). As no evidence of deaths resulting directly from either CD or ADHD was found, no years of life lost (YLLs) were calculated. Therefore, the number of disability-adjusted life years (DALYs) was equal to that of YLDs.

**Results:** Globally, CD was responsible for 5.75 million YLDs/DALYs with ADHD responsible for a further 491,500. Collectively, CD and ADHD accounted for 0.80% of total global YLDs and 0.25% of total global DALYs. In terms of global DALYs, CD was the 72nd leading contributor and among the 15 leading causes in children aged 5–19 years. Between 1990 and 2010, global DALYs attributable to CD and ADHD remained stable after accounting for population growth and ageing.

**Conclusions:** The global burden of CD and ADHD is significant, particularly in male children. Appropriate allocation of resources to address the high morbidity associated with CD and ADHD is necessary to reduce global burden. However, burden estimation was limited by data lacking for all four epidemiological parameters and by methodological challenges in quantifying disability. Future studies need to address these limitations in order to increase the accuracy of burden quantification.

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Journal of Child Psychology and Psychiatry. 2014 Apr;55:393-401.

**BIFACTOR LATENT STRUCTURE OF ADHD/ODD SYMPTOMS: PREDICTIONS OF DUAL-PATHWAY/TRAIT-IMPULSIVITY ETIOLOGICAL MODELS OF ADHD.**

**Burns GL, de Moura MA, Beauchaine TP, et al.**

**Objective:** To determine if ADHD/ODD symptoms are better represented by a bifactor model of disruptive behavior [general disruptive behavior factor along with specific inattention (IN), specific hyperactivity/impulsivity (HI), and specific oppositional defiant disorder (ODD) factors] than an ADHD-IN, ADHD-HI, and ODD three-factor model.

**Method:** Mothers' and fathers' ratings of ADHD-IN, ADHD-HI, and ODD symptoms in a community sample of 4,658 children and adolescents (53% female) from Brazil, Thailand, and the US were used to evaluate the measurement models.

**Results:** The bifactor model of disruptive behavior provided a better fit than the three factor model. The bifactor model also occurred with mothers' and fathers' ratings of male and female children and adolescents.

**Conclusions:** Consistent with predictions derived from recently articulated dual-pathway and trait-impulsivity models of externalizing liability, and from behavioral genetics studies indicating near complete overlap in vulnerability to ADHD and ODD, ADHD and ODD symptoms arose from a single, general disruptive behavior factor, which accounted for all of the variance in HI subscale scores and over half of the variance IN and ODD subscales. Thus, IN, HI, and ODD subscale scores strongly reflect a general disruptive behavior factor—not the specific content of their respective constructs.

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Journal of Criminal Justice. 2014 Mar;42:95-103.

**LINKING EARLY ADHD TO ADOLESCENT AND EARLY ADULT OUTCOMES AMONG AFRICAN AMERICANS.**

**Behnken MP, Abraham WT, Cutrona CE, et al.**

**Purpose:** The purpose of this study is to propose a mediational model for the mechanisms through which a diagnosis of Attention-Deficit/Hyperactivity Disorder between the ages of 10 and 12 predicts positive and negative early adult outcomes for African Americans.

**Methods:** The study sample (n=211) was drawn from the Des Moines, Iowa subsample of the Family and Community Health Study. Participants were first assessed between the ages of 10 and 12, again between the ages of 12 and 18, and finally at 18 to 23.

**Results:** Findings indicate that a diagnosis of ADHD before age 13 indirectly predicted subsequent exclusionary school discipline and juvenile arrest in adolescence, and both arrests and educational attainment in young adulthood.

**Conclusions:** These findings offer support for the School to Prison Pipeline model, showing that for some African American children, a childhood diagnosis of ADHD can lead to negative school experiences that result in harsh school-based discipline, which in turn open the door to justice system involvement spanning several developmental stages.

Journal of Psychoeducational Assessment. 2014 Apr;32:95-106.

**COMMON COGNITIVE DEFICITS IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND AUTISM: WORKING MEMORY AND VISUAL-MOTOR INTEGRATION.**

**Englund JA, Decker SL, Allen RA, et al.**

Cognitive deficits in working memory (WM) are characteristic features of Attention-Deficit/Hyperactivity Disorder (ADHD) and autism. However, few studies have investigated cognitive deficits using a wide range of cognitive measures. We compared children with ADHD (n = 49) and autism (n = 33) with a demographically matched control group (n = 79) on a multidimensional battery of cognitive ability. Results confirmed previous research that both groups were characterized by deficits in WM. However, results also suggest verbal WM measures were better predictors than nonverbal WM measures. In addition, measures of visual-motor integration are equally discriminating of children with ADHD and autism from a matched control group. In all, 81% discrimination accuracy was obtained using only WM and visual-motor integration measures. Demonstrated shared deficits in WM and visual-motor integration are explained based on proposed neurological mechanisms common across the two disorders. Clinical implications are discussed.

Mil Med. 2014 May;179:573-78.

**ATTENTION DEFICIT HYPERACTIVITY DISORDER AND MEDICATION USE BY CHILDREN DURING PARENTAL MILITARY DEPLOYMENTS.**

**Hisle-Gorman E, Eide M, Coll EJ, et al.**

**OBJECTIVE:** Parental deployment is associated with children's increased mental health needs. Attention Deficit Hyperactivity Disorder (ADHD) is the most common pediatric mental health diagnosis. We hypothesize children with ADHD will have increased mental health and medication needs during parental deployment.

**METHODS:** Retrospective cohort study of children with ADHD aged 4-8 years in the Military Health System.

**RESULTS:** Of 413,665 children aged 4-8 years, 34,205 (8.3%) had ADHD and 19,123 (55.9%) of these were prescribed ADHD medications. During parental deployments, children with ADHD had a 13% increased rate of mental and behavioral health care visits (IRR 1.13 [95% CI 1.12-1.14; p < 0.00001]) and a decreased rate of medication changes (IRR 0.94 [95% CI 0.91-0.96; p < 0.00001]) compared to when parents were at home. Medication changes related to deployment varied by age; school-aged children had decreased medication events (IRR 0.88 [95% CI 0.86-0.91; p < 0.00001]) and preschool-aged children had increased medication events (IRR 1.05 [95% CI 1.02-1.10; p = .006]) during parental deployment.

**CONCLUSIONS:** During parental deployment, children with ADHD aged 4-8 years have increased mental health visits and decreased ADHD medication changes. Younger children have increased medication changes, whereas older children have decreased changes during a parent's deployment.

Neurotoxicol Teratol. 2014 May;44C:30-45.

**EXPOSURE TO NEUROTOXICANTS AND THE DEVELOPMENT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER AND ITS RELATED BEHAVIORS IN CHILDHOOD.**

**Yolton K, Cornelius M, Ornoy A, et al.**

The purpose of this manuscript is to review the literature to determine evidence of associations between exposure to prenatal and postnatal environmental agents and the development of attention deficit hyperactivity disorder (ADHD) and related behaviors. A review of published research literature was conducted on associations between exposures to prenatal and postnatal cigarette smoke, prenatal exposure to alcohol, cocaine, and heroin, childhood exposure to lead, and prenatal exposure to organophosphate pesticides and outcomes of ADHD or behaviors related to ADHD. Review of the literature in these areas provides some evidence of associations between each of the exposures and ADHD-related behaviors, with the strongest evidence from prenatal cigarette and alcohol exposure and postnatal lead exposure. However, research on each exposure also produced evidence of weaknesses in these hypothesized links due to imprecise research methodologies and issues of confounding and inaccurate covariate adjustment. More rigorous studies are needed to provide definitive evidence of associations between each of these prenatal or postnatal exposures and the development of ADHD or symptoms of ADHD. Future studies need to clarify the underlying mechanisms between these exposures and the increased risk for ADHD and associated behaviors. More research is also needed utilizing study designs that include genetic information, as ADHD is highly heritable and there appear to be some protective mechanisms offered by certain genetic characteristics as evidenced in gene by environmental studies. Finally, while studies focusing on individual drugs and chemicals are an important first step, we cannot ignore the fact that children are exposed to combinations of drugs and chemicals, which can interact in complex ways with each other, as well as with the child's genetic makeup and psychosocial environment to influence ADHD risk.

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Nord J Psychiatry. 2014 May;1-6.

**THE IMPACT OF CHILDHOOD TRAUMAS, DEPRESSIVE AND ANXIETY SYMPTOMS ON THE RELATIONSHIP BETWEEN BORDERLINE PERSONALITY FEATURES AND SYMPTOMS OF ADULT ATTENTION DEFICIT HYPERACTIVITY DISORDER IN TURKISH UNIVERSITY STUDENTS.**

**Dalbudak E, Evren C.**

**Background:** Previous studies reported that there is a significant association between attention deficit hyperactivity disorder (ADHD) in childhood and borderline personality disorder (BPD) in adulthood. Aim: The aim of this study is to investigate the relationship of borderline personality features (BPF) and ADHD symptoms while controlling the effect of childhood traumas, symptoms of depression and anxiety in adulthood on this relationship in Turkish university students.

**Methods:** A total of 271 Turkish university students participated in this study. The students were assessed through the Turkish version of the Borderline Personality Inventory (BPI), the Adult ADHD Self-Report Scale (ASRS), the Childhood Trauma Questionnaire (CTQ-28), the Beck Depression Inventory (BDI) and the Beck Anxiety Inventory (BAI).

**Results:** Correlation analyses have revealed that severity of BPF is related with adult ADHD symptoms, emotional, physical abuse and depression scores. Hierarchical regression analysis has indicated that depressive symptoms, emotional and physical abuse and the severity of ADHD symptoms are the predictors for severity of BPF.

**Conclusions:** Findings of the present study suggests that clinicians must carefully evaluate these variables and the relationship between them to understand BPF and ADHD symptoms in university students better. Together with depressive symptoms, emotional and physical abuse may play a mediator role on this relationship. Further studies are needed to evaluate causal relationship between these variables in both clinical and non-clinical populations.

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Patient Prefer Adherence. 2014;8:661-70.

**DO PARENTS OF CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) RECEIVE ADEQUATE INFORMATION ABOUT THE DISORDER AND ITS TREATMENTS? A QUALITATIVE INVESTIGATION.**

**Ahmed R, Borst JM, Yong CW, et al .**

**BACKGROUND:** Attention-deficit/hyperactivity disorder (ADHD) is the most prevalent pediatric neurodevelopmental condition, commonly treated using pharmacological agents such as stimulant medicines. The use of these agents remains contentious, placing parents in a difficult position when deciding to initiate and/or continue their child's treatment. Parents refer to a range of information sources to assist with their treatment decision-making. This qualitative study aimed to investigate 1) parents' ADHD-related knowledge pre- and post-diagnosis, 2) the information sources accessed by parents, 3) whether parents' information needs were met post-diagnosis, and 4) parents' views about strategies to meet their information needs.

**METHODS:** Three focus groups (n=16 parents), each lasting 1.0-1.5 hours were conducted. Focus groups were audio-recorded and transcribed verbatim. Transcripts were analyzed using the framework method, coded, and categorized into themes.

**RESULTS:** Generally, parents had limited ADHD-related knowledge prior to their child's diagnosis and perceived prescription medicines indicated for ADHD in a negative context. Parents reported improved knowledge after their child's diagnosis; however, they expressed dissatisfaction with information that they accessed, which was often technical and not tailored to their child's needs. Verbal information sought from health care professionals was viewed to be reliable but generally medicine-focused and not necessarily comprehensive. Parents identified a need for concise, tailored information about ADHD, the medicines used for its treatment, and changes to their child's medication needs with age. They also expressed a desire for increased availability of support groups and tools to assist them in sourcing information from health care professionals during consultations, such as question prompt lists.

**CONCLUSION:** There are gaps in parents' knowledge about ADHD and its treatment, and an expressed need for tailored and reliable information. Future research needs to focus on providing parents with avenues to access concise, reliable, and relevant information and support in order to empower them to make the best treatment decision for their child.

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Pediatrics. 2014 May.

**NEUROBEHAVIORAL COMORBIDITIES IN CHILDREN WITH ACTIVE EPILEPSY: A POPULATION-BASED STUDY.**

**Reilly C, Atkinson P, Das KB, et al.**

**BACKGROUND:** In addition to recurrent epileptic seizures, children with epilepsy can have coexisting cognitive and behavioral difficulties but the spectrum and prevalence of such difficulties are uncertain.

**METHODS:** The Children with Epilepsy in Sussex Schools study is a prospective, community-based study involving school-aged children (5-15 years) with active epilepsy in a defined geographical area in the United Kingdom. Participants underwent comprehensive psychological assessment, including measures of cognition, behavior, and motor functioning. Consensus neurobehavioral diagnoses were made with respect to Diagnostic and Statistical Manual, Fourth Edition-Text Revision (DSM-IV-TR) criteria.

**RESULTS:** A total of 85 children (74% of eligible population) were enrolled; 80% of children with active epilepsy had a DSM-IV-TR behavioral disorder and/or cognitive impairment (IQ <85). Intellectual disability (ID) (IQ <70) (40%), attention-deficit/hyperactivity disorder (ADHD) (33%), and autism spectrum disorder (ASD) (21%) were the most common neurobehavioral diagnoses. Of those who met criteria for a DSM-IV-TR behavioral disorder, only one-third had previously been diagnosed. Logistic regression revealed that seizures in the first 24 months compared with first seizures at 24 to 60 or 61+ months (odds ratio [OR] 13, 95% confidence interval 2.2-76.9; OR 21.3, 3.2-148.9) and polytherapy (OR 7.7, 1.6-36.3) were independently associated with ID and the presence of ID was associated with a diagnosis of ASD (OR 14.1, 2.3-87.1) after Bonferroni adjustment. Epilepsy-related factors did not independently predict the presence of behavioral disorders.

**CONCLUSIONS:** Screening for neurobehavioral comorbidities should be an integral part of management in children with "active" epilepsy. There is a need for research to identify neurobiological mechanisms underpinning neurobehavioral impairments and studies to evaluate possible treatments.

Pharmacogenomics J. 2014 Jun;14:295-302.

**POSITIVE EFFECTS OF METHYLPHENIDATE ON HYPERACTIVITY ARE MODERATED BY MONOAMINERGIC GENE VARIANTS IN CHILDREN WITH AUTISM SPECTRUM DISORDERS.**

**McCracken JT, Badashova KK, Posey DJ, et al.**

Methylphenidate (MPH) reduces hyperactive-impulsive symptoms common in children with autism spectrum disorders (ASDs), however, response and tolerability varies widely. We hypothesized monoaminergic gene variants may moderate MPH effects in ASD, as in typically developing children with attention-deficit/hyperactivity disorder. Genotype data were available for 64 children with ASD and hyperactivity who were exposed to MPH during a 1-week safety/tolerability lead-in phase and 58 who went on to be randomized to placebo and three doses of MPH during a 4-week blinded, crossover study. Outcome measures included the Clinical Global Impression-Improvement (CGI-I) scale and the Aberrant Behavior Checklist (ABC-hyperactivity index). A total of 14 subjects discontinued the study because of MPH side effects. Subjects were genotyped for variants in DRD1-DRD5, ADRA2A, SLC6A3, SLC6A4, MAOA and MAOB, and COMT. Forty-nine percent of the sample met positive responder criteria. In this modest but relatively homogeneous sample, significant differences by DRD1 ( $P=0.006$ ), ADRA2A ( $P<0.02$ ), COMT ( $P<0.04$ ), DRD3 ( $P<0.05$ ), DRD4 ( $P<0.05$ ), SLC6A3 ( $P<0.05$ ) and SLC6A4 ( $P<0.05$ ) genotypes were found for responders versus non-responders. Variants in DRD2 ( $P<0.001$ ) and DRD3 ( $P<0.04$ ) were associated with tolerability in the 14 subjects who discontinued the trial. For this first MPH pharmacogenetic study in children with ASD, multiple monoaminergic gene variants may help explain individual differences in MPH's efficacy and tolerability.

Psychiatry Investig. 2014 Apr;11:124-30.

**THE IMPACT OF DEPRESSIVE SYMPTOMS IN ADULTS WITH ADHD SYMPTOMS ON FAMILY FUNCTION AND ADHD SYMPTOMS OF THEIR CHILDREN.**

**Hong SB, Lee JH, Kim JW, et al.**

**OBJECTIVE:** People with attention-deficit/hyperactivity disorder (ADHD) exhibit considerable impairment in social, academic, or occupational functioning. The present study aimed to examine the patterns of associations between ADHD symptoms, depression, and family functioning.

**METHODS:** The sample consisted of 1,022 adults randomly selected from a district in Seoul, South Korea. Several self-assessment scales were utilized to rate ADHD symptoms (both past and current), current symptoms of depression, and level of family functioning. ADHD symptoms in the children of these participants were also assessed. Pearson's correlation and multiple linear regression analyses were performed; structural equation modeling (SEM) was conducted to determine the best fitting model.

**RESULTS:** Adult ADHD symptoms were positively associated with depressive symptoms. Depressive symptoms, in turn, mediated the relationship between adult ADHD symptoms and cohesion among family members. In addition, depressive symptoms mediated the relationship between adult ADHD symptoms and their children's ADHD symptoms.

**CONCLUSION:** The relationship between adult ADHD symptoms and family dysfunction may be influenced by depressive symptoms. When treating ADHD in adults, clinicians should pay attention to the presence or absence of depression.

Psychiatry Investig. 2014 Apr;11:143-51.

**BADUK (THE GAME OF GO) IMPROVED COGNITIVE FUNCTION AND BRAIN ACTIVITY IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.**

**Kim SH, Han DH, Lee YS, et al.**

**OBJECTIVE:** Attention deficit hyperactivity disorder (ADHD) symptoms are associated with the deficit in executive functions. Playing Go involves many aspect of cognitive function and we hypothesized that it would be effective for children with ADHD.

**METHODS:** Seventeen drug naive children with ADHD and seventeen age and sex matched comparison subjects were participated. Participants played Go under the instructor's education for 2 hours/day, 5 days/week. Before and at the end of Go period, clinical symptoms, cognitive functions, and brain EEG were assessed with Dupaul's ADHD scale (ARS), Child depression inventory (CDI), digit span, the Children's Color Trails Test (CCTT), and 8-channel QEEG system (LXE3208, Laxtha Inc., Daejeon, Korea).

**RESULTS:** There were significant improvements of ARS total score ( $z=2.93$ ,  $p<0.01$ ) and inattentive score ( $z=2.94$ ,  $p<0.01$ ) in children with ADHD. However, there was no significant change in hyperactivity score ( $z=1.33$ ,  $p=0.18$ ). There were improvement of digit total score ( $z=2.60$ ,  $p<0.01$ ;  $z=2.06$ ,  $p=0.03$ ), digit forward score ( $z=2.21$ ,  $p=0.02$ ;  $z=2.02$ ,  $p=0.04$ ) in both ADHD and healthy comparisons. In addition, ADHD children showed decreased time of CCTT-2 ( $z=2.21$ ,  $p=0.03$ ). The change of theta/beta right of prefrontal cortex during 16 weeks was greater in children with ADHD than in healthy comparisons ( $F=4.45$ ,  $p=0.04$ ). The change of right theta/beta in prefrontal cortex has a positive correlation with ARS-inattention score in children with ADHD ( $r=0.44$ ,  $p=0.03$ ).

**CONCLUSION:** We suggest that playing Go would be effective for children with ADHD by activating hypoarousal prefrontal function and enhancing executive function.

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Psychiatry Investig. 2014 Apr;11:119-23.

**VISUAL PERCEPTION OF ADHD CHILDREN WITH SENSORY PROCESSING DISORDER.**

**Jung H, Woo YJ, Kang JW, et al.**

**OBJECTIVE:** The aim of the present study was to investigate the visual perception difference between ADHD children with and without sensory processing disorder, and the relationship between sensory processing and visual perception of the children with ADHD.

**METHODS:** Participants were 47 outpatients, aged 6-8 years, diagnosed with ADHD. After excluding those who met exclusion criteria, 38 subjects were clustered into two groups, ADHD children with and without sensory processing disorder (SPD), using SSP reported by their parents, then subjects completed K-DTVP-2. Spearman correlation analysis was run to determine the relationship between sensory processing and visual perception, and Mann-Whitney-U test was conducted to compare the K-DTVP-2 score of two groups respectively.

**RESULTS:** The ADHD children with SPD performed inferiorly to ADHD children without SPD in the on 3 quotients of K-DTVP-2. The GVP of K-DTVP-2 score was related to Movement Sensitivity section ( $r=0.368^*$ ) and Low Energy/Weak section of SSP ( $r=0.369^*$ ).

**CONCLUSION:** The result of the present study suggests that among children with ADHD, the visual perception is lower in those children with co-morbid SPD. Also, visual perception may be related to sensory processing, especially in the reactions of vestibular and proprioceptive senses. Regarding academic performance, it is necessary to consider how sensory processing issues affect visual perception in children with ADHD.

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Psychiatry Res. 2014 May.

**AN INVESTIGATION OF GAIT IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER: A CASE CONTROLLED STUDY.**

**Papadopoulos N, McGinley JL, Bradshaw JL, et al.**

This study aimed to compare the gait of children with ADHD - Combined Type (ADHD-CT) to typically developing (TD) children. Children with ADHD-CT (n=14; mean age 10 years 4 months) and a TD group (n=13; mean age 10 years 9 months) walked at self-selected slow, preferred and fast speed on an electronic walkway system. Participants completed a total of 15 walking trials; 5 trials per walking condition. Groups were matched on age, intellectual functioning, height and weight. In the preferred walking condition, there was no difference in spatio-temporal gait variables between the ADHD-CT and TD control groups. At self-selected fast speed, children with ADHD-CT were faster and walked with a higher cadence. The subtle alterations in gait pattern that may reflect a timing deficit is consistent with previous ADHD motor studies. In addition, this study extends previous studies in characterising the unique gait profile of non-medicated children with ADHD-CT where a diagnosis of autism spectrum disorder has been ruled out.

Psychiatry Res. 2014 May.

**ALTERED STRATEGY IN SHORT-TERM MEMORY FOR PICTURES IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: A NEAR-INFRARED SPECTROSCOPY STUDY.**

**Sanefuji M, Yamashita H, Torisu H, et al.**

Strategy in short-term memory for serially presented pictures shifts gradually from a non-phonological to a phonological method as memory ability increases during typical childhood development. However, little is known about the development of this strategic change in children with attention-deficit/hyperactivity disorder (ADHD). To understand the neural basis of ADHD, we investigated short-term memory strategies using near-infrared spectroscopy. ADHD children aged from 6 to 12 years and age- and sex-matched control children were assessed in this study. Regional activity was monitored in the left ventrolateral prefrontal cortex to assess strategies used during short-term memory for visual or phonological objects. We examined the hypothesis that the strategic methods used would be correlated with memory ability. Higher memory ability and the phonological strategy were significantly correlated in the control group but not in the ADHD group. Intriguingly, ADHD children receiving methylphenidate treatment exhibited increased use of phonological strategy compared with those without. In conclusion, we found evidence of an altered strategy in short-term memory in ADHD children. The modulatory effect of methylphenidate indicates its therapeutic efficacy.

Psychol Med. 2014 Apr;44:1087-99.

**A LONGITUDINAL EXAMINATION OF NEUROPSYCHOLOGICAL AND CLINICAL FUNCTIONING IN BOYS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD): IMPROVEMENTS IN EXECUTIVE FUNCTIONING DO NOT EXPLAIN CLINICAL IMPROVEMENT.**

**Coghill DR, Hayward D, Rhodes SM, et al.**

**Background:** Attention deficit hyperactivity disorder (ADHD) often, but not always, persists into adulthood. Investigations of the associations between clinical and biological markers of persistence can shed light on causal pathways. It has been proposed that compensatory improvements in executive neuropsychological functioning are associated with clinical improvements. This is the first study to test this hypothesis prospectively.

**Method:** The clinical and neuropsychological functioning of 17 boys with ADHD (mean age 10.45 years at time 1; 14.65 years at time 2) and 17 typically developing (TYP) boys (mean age 10.39 years at time 1; 14.47 years at time 2) was tested on two occasions, 4 years apart. This was done using a battery of standardized neuropsychological tests that included tasks with high and low executive demands.

**Results:** Clinical improvements were observed over time. Neuropsychological performance improvements were also evident, with ADHD boys developing with a similar pattern to TYP boys, but with a

developmental lag. Whilst there was an association between reduced symptoms and superior performance at retest for one task with a high executive demand (spatial working memory), this was not seen with two further high executive demand tasks [Stockings of Cambridge and intra-dimensional extra-dimensional (ID/ED) set shifting]. Also, there was no association between change in executive functioning and change in symptoms. Baseline performance on the ID/ED set-shifting task predicted better clinical outcome. Only change in performance on the low executive demand delayed matching-to-sample task predicted better clinical outcome.

**Conclusions:** These data highlight the importance of longitudinal measurements of cognition, symptoms and treatment response over time in children and adolescents with ADHD. (PsycINFO Database Record (c) 2014 APA, all rights reserved) (journal abstract)

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Res Dev Disabil. 2014 Aug;35:1878-84.

**THE WRITTEN LANGUAGE PERFORMANCE OF CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER IN TAIWAN.**

**Lee HY, Chen RA, Lin YS, et al.**

Poor writing is common in children with Attention Deficit Hyperactivity Disorder (ADHD). However, the writing performance of children with ADHD has been rarely formally explored in Taiwan, so the purpose of this study was to investigate writing features of children with ADHD in Taiwan. There were 25 children with ADHD and 25 normal children involved in a standardization writing assessment - Written Language Test for Children, to assess their performance at the dictation, sentence combination, adding/deducting radical, cloze and sentence making subtests. The results showed that except for the score of the sentence combining subtest, the score of children with ADHD was lower than the normal student in the rest of the subtests. Almost 60% of ADHD children's scores were below the 25th percentile numbers, but only 20% for normal children. Thus, writing problems were common for children with ADHD in Taiwan, too. First, children with ADHD performed worse than normal children on the dictation and cloze subtests, showing the weaker abilities of retrieving correct characters from their mental lexicon. Second, children with ADHD performed worse on the adding/deducting radical subtest than normal children did. Finally, at the language level, the score of children with ADHD on the sentence combination subtest was not lower than normal children, implicating their normal grammatic competence. It is worth mentioning that Taiwanese children with ADHD ignore the details of characters when they are writing, a finding that is common across languages.

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Res Dev Disabil. 2014 May;35:1198-207.

**PSYCHOLOGICAL DISTRESS IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER AND ATTENTION-DEFICIT HYPERACTIVITY DISORDER.**

**Missiuna C, Cairney J, Pollock N, et al.**

This study explored whether or not a population-based sample of children with developmental coordination disorder (DCD), with and without comorbid attention deficit/hyperactivity disorder (ADHD), experienced higher levels of psychological distress than their peers. A two-stage procedure was used to identify 244 children: 68 with DCD only, 54 with ADHD only, 31 with comorbid DCD and ADHD, and 91 randomly selected typically developing (TD) children. Symptoms of depression and anxiety were measured by child and parent report. Child sex and caregiver ethnicity differed across groups, with a higher ratio of boys to girls in the ADHD only group and a slightly higher proportion of non-Caucasian caregivers in the TD group. After controlling for age, sex, and caregiver ethnicity, there was significant variation across groups in both anxiety (by parent report,  $F(3,235)=8.9$ ,  $p<0.001$ ; by child report,  $F(3,236)=5.6$ ,  $p=0.001$ ) and depression (parent report,  $F(3,236)=23.7$ ,  $p<0.001$ ; child report,  $F(3,238)=9.9$ ,  $p<0.001$ ). In general, children in all three disorder groups had significantly higher levels of symptoms than TD children, but most pairwise differences among those three groups were not significant. The one exception was the higher level of depressive symptoms noted by parent report in the ADHD/DCD group. In conclusion, children identified on the basis of motor coordination problems through a population-based screen showed significantly more symptoms of

depression and anxiety than typically developing children. Children who have both DCD and ADHD are particularly at heightened risk of psychological distress.

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Res Dev Disabil. 2014 May;35:2069-76.

**ASSISTING CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER TO REDUCE THE HYPERACTIVE BEHAVIOR OF ARBITRARY STANDING IN CLASS WITH A NINTENDO WII REMOTE CONTROLLER THROUGH AN ACTIVE REMINDER AND PREFERRED REWARD STIMULATION.**

**Shih CH, Wang SH, Wang YT.**

Recent studies in the field of special education have shown that in combination with software technology, high-tech commercial products can be applied as useful assistive technology devices to help people with disabilities. This study extended this concept to turn a Nintendo Wii Remote Controller into a high-performance limb action detector, in order to evaluate whether two students with Attention Deficit Hyperactivity Disorder (ADHD) could reduce their hyperactive behavior through an active reminder and stimulation in the form of the participants' preferred rewards. This study focused on one particular hyperactive behavior common to both students: standing up arbitrarily during class. The active reminder was in the form of vibration feedback provided via the built-in function of the Wii Remote Controller, which was controlled and triggered by a control system to remind participants when they were engaging in standing behavior. This study was performed according to a multiple baseline design across participants. The results showed that both participants significantly improved their control over their hyperactive behavior during the intervention phase, and retained this effective performance in the maintenance phase. The practical and developmental implications of the findings are discussed.

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Wei Sheng Yan Jiu. 2014 Mar;43:235-39.

**STUDY ON THE ASSOCIATION BETWEEN DIET, NUTRIENT AND ATTENTION DEFICIT HYPERACTIVITY DISORDER AMONG CHILDREN IN SHANGHAI, KUNSHAN, WUXI THREE KINDERGARTEN.**

**Liu J, He P, Li L, et al.**

**OBJECTIVE:** To explore the correlation between nutrition and children with attention deficit hyperactivity disorder (ADHD).

**METHODS:** For 417 students from Shanghai and Jiangsu Province, Connors Parent Symptom Questionnaire was used to investigate learning disorders and Food Frequency Questionnaire was used to evaluate the dietary and nutrient intake. Correlation between ADHD and Diet was analyzed.

**RESULTS:** The rate of the ADHD abnormalities was 3.2%, there was no statistical difference between both the various regions and the genders. Partial correlation analysis showed that there was a positive correlation between diet intake (processed meat, salty snacks) and hyperactivity index ( $P < 0.05$ ); A negative correlation was found between vegetables, coarse cereals, aquatic products, beef, mutton, milk and hyperactivity index ( $P < 0.05$ ). The regression showed that there was a negative correlation between calcium and hyperactivity index ( $P < 0.05$ ).

**CONCLUSION:** Children's diet pattern is an important environmental impact factor for ADHD.

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<http://wkzo.com/news/articles/2014/may/02/adhd-medicines-long-term-safety-still-a-question/>



## ADHD medicine's long-term safety still a question

Friday, May 02, 2014 2:32 p.m. EDT

By Ronnie Cohen

NEW YORK (Reuters Health) - Scant research has been done on the long-term safety of drugs for attention-deficit/hyperactivity disorder (ADHD), a new analysis shows, though millions of American children have been taking them for decades.

The U.S. Centers for Disease Control and Prevention estimates that 11 percent of American children between the ages of four and 17 - or 6.4 million - had been diagnosed with ADHD as of 2011. About half were taking drugs to treat the disorder.

"We have too few long-term studies on the effects of these medicines," Dr. Sanford Newmark told Reuters Health. "There's a big gap in our understanding of what the effects of these medicines might be. It's worrisome."

A pediatrician from the Osher Center for Integrative Medicine at the University of California, San Francisco, Newmark was not involved in the current study.

Researchers from the Mario Negri Institute for Pharmacological Research in Milan, Italy, found a dearth of long-term studies on side effects of stimulants such as Ritalin, which some kids take into adulthood.

An extensive search revealed just six studies, all funded by pharmaceutical companies, that followed a total of 3,000 children treated with ADHD medications in clinical trials and examined related side effects for at least 12 weeks.

"ADHD drugs seem to be safe and well tolerated according to the available data, but more studies are needed," lead author Dr. Antonio Clavenna told Reuters Health in an email.

Decreased appetite, insomnia, headaches and stomach pain were the most common side effects reported in the studies, the authors write in the Archives of Disease in Childhood. Patients also experienced tics and mood swings.

But the studies reported only common side effects and may have missed unusual ones, like suicidal thinking and long-lasting erections, that have concerned U.S. regulators, the authors write.

"In this regard, the safety profile of medications is not fully understood, and monitoring is needed," Clavenna said.

The Food and Drug Administration (FDA) in December issued a warning that ADHD stimulants such as Ritalin and Concerta may in rare cases cause prolonged and painful erections, some lasting so long they might require surgery. In 2005, after short-term studies showed an increased risk of suicidal thinking in children and adolescents, the FDA ordered a black-box warning on atomoxetine, known as Strattera.

Kids diagnosed with ADHD tend to have trouble paying attention and may have poor impulse control. Doctors frequently prescribe medications to increase focus and reduce impulsivity.

Some children improve without prescription drugs with sleep and dietary changes, behavioral therapy or extra help at school.

Newmark said he often sees children whose parents complain about ADHD medication side effects not reported in studies.

"One of the side effects they don't talk about that I see all the time is that these kids have personality changes," he said. "Parents say, 'The medicine is working, but he's just lost his spark,' or, 'She's just lost her joy.'"

Hundreds of clinical studies have reported that most of the side effects of drugs used to treat ADHD are mild and temporary, the authors of the current study write.

In their review, the proportion of patients that stopped taking ADHD medication, which ranged from 8 percent to 25 percent, was the only adverse event measured in all six studies.

Most study participants who stopped taking the medication because of side effects stopped in the first year.

Because the studies investigated different side effects, the authors could not compare studies or treatment outcomes. They call the reporting of side effects "unsatisfactory" and write, "more should be done to improve the evaluation of drug safety."

In 2011, Danish researchers, after reviewing short-term studies examining adverse reactions to ADHD drugs, also called for long-term safety studies. They pointed out that drug manufacturers funded almost all of the studies, and a majority of the authors received contributions from the pharmaceutical companies producing the medications.

"The pharmaceutical company's job is to sell their product," Newmark said.

"It is very important for us as doctors to base our practice not on what the companies say but on objective evidence," he said. "It's easier and cheaper for the pharmaceutical companies to do short-term studies and say, 'Look, the medicine works.'"

SOURCE: <http://bit.ly/1pzJ82v> Archives of Disease in Childhood, online April 19, 2014.

## ARGOMENTO

## Le gravi disabilità della comunicazione: i bisogni dei pazienti (e delle loro famiglie)



**T**ra 0 e 18 anni, 5 persone ogni 1000 non parlano, fanno fatica a capire le parole degli altri o presentano gravi disturbi della comunicazione. Si tratta di circa 8.000 ragazzi in Lombardia, in Italia quasi 50.000.

Di questo si è discusso nel corso del Convegno “Bisogni comunicativi complessi e partecipazione nei contesti di vita: verso una conoscenza diffusa?”

che si è tenuto presso l’IRCCS Istituto di Ricerche Farmacologiche Mario Negri il 22-23 ottobre 2013 a cui hanno partecipato oltre 300 operatori sanitari, insegnanti, genitori e rappresentanti istituzionali.

Alcuni dei pazienti con gravi disturbi della comunicazione hanno anche problemi motori, altri una sindrome genetica o un disturbo autistico. Per tutti, crescere e apprendere senza la possibilità di comunicare è molto difficile, e sono necessarie modalità che permettano di comunicare lo stesso anche senza la voce, attraverso interventi di Comunicazione Aumentativa.

Al riguardo possono essere utilizzati sistemi di simboli o di immagini, in cui tutte le figure usate hanno scritti sopra la parola o il verbo che rappresentano. Il bambino può così riconoscere le immagini e l’interlocutore leggere le parole. Possono essere usati strumenti digitali programmati per “prestare” la voce quando necessario, o avanzate tecnologie informatiche. L’intero ambiente deve utilizzare un linguaggio scritto, parlato, visivo adeguato alle capacità del bambino e che deve essere implementato e garantito nel tempo, con il continuo

coinvolgimento di genitori e insegnanti.

Troppo spesso però gli utenti non riescono ad accedere agli interventi di supporto alla comunicazione indispensabili, o devono farlo in centri molto lontani da casa.

È per questo motivo che, a partire dal gennaio 2010 e con il contributo della Regione Lombardia, ASL Milano ha attivato uno specifico progetto con la finalità di garantire a tutti i pazienti con bisogni comunicativi complessi e alle loro famiglie la possibilità di accedere precocemente ai servizi preposti e nel proprio territorio. Il progetto ha visto la partecipazione di 22 Unità Operative di Neuropsichiatria dell’Infanzia e dell’Adolescenza (UONPIA) lombarde e dell’IRCCS Mario Negri ed è coordinato dal Centro Sovrazonale di Comunicazione Aumentativa della Fondazione “Ca’ Granda” Ospedale Maggiore Policlinico.

I risultati ottenuti dal Progetto possono essere così sintetizzati: formazione degli operatori sanitari, dei genitori e degli insegnanti; strutturazione di nuove modalità di supporto e consulenza a distanza; sensibilizzazione del territorio attraverso iniziative a cui hanno partecipato più di 4000 persone; creazione e diffusione di materiali informativi mirati; strutturazione di gruppi di operatori competenti in Comunicazione Aumentativa in più dell’80% delle UONPIA lombarde.

Il Progetto ha dimostrato inoltre come strumenti nati per bambini con grave disabilità siano divenuti importanti supporti alla crescita di tutti i bambini.

**Antonella Costantino<sup>1</sup>, Maurizio Bonati<sup>2</sup>**

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## ARGOMENTO

**I**l progetto “Supporto nelle gravi disabilità della comunicazione in età evolutiva” è uno dei progetti di neuropsichiatria infantile finanziati da Regione Lombardia di cui la Fondazione IRCCS “Ca’ Granda” Ospedale Maggiore Policlinico è capofila, in stretta collaborazione con l’Azienda Ospedaliera di Treviglio e l’IRCCS Mario Negri e grazie alla sensibilità di ASL Milano.

Il Progetto nasce dalla necessità di garantire risposte ad un bisogno ancora ineso per i bambini e per le loro famiglie, e si colloca in un’ottica fortemente innovativa, che vede la partecipazione delle famiglie e dei contesti di vita come elemento fondamentale dell’intervento, insieme alla rete dei servizi di neuropsichiatria infantile e di riabilitazione dell’età evolutiva.

Vuole consentire ad ogni bambino, indipendentemente da dove vive e dalla severità della disabilità che lo ha colpito, di poter usufruire di adeguati strumenti per comunicare, interagire, apprendere e crescere. Un diritto fondamentale, per ognuno di noi.

E vuole far crescere la capacità di risposta di tutti i territori.

La continuità e il sostegno che la Direzione ha voluto dare ad un percorso che viene da lontano non è quindi casuale.

Da un lato, vuole garantire una reale continuità assistenziale per ogni utente e per la sua famiglia.

Dall’altro, è parte di una scelta strategica di investimento che la Fondazione Policlinico ha messo in atto in questi anni nell’ambito della neuropsichiatria dell’infanzia e dell’adolescenza, in termini di risorse, spazi, materiali e potenziamento di interventi, in particolare in ambiti rispetto ai quali le risposte sono insufficienti e richiedono innovazione, come la disabilità complessa, la migrazione e le acuzie psichiatriche in adolescenza.

Punto di arrivo e nuovo punto di partenza è la

recente riorganizzazione prevista dal POA (Piano di Organizzazione Aziendale), che ricolloca la UONPIA nell’ambito del Dipartimento di Neuroscienze, nell’Area Omogenea Salute Mentale.

Negli ultimi anni, infatti, le trasformazioni delle conoscenze nell’ambito della genetica e della neurobiologia e delle interazioni tra esse e l’ambiente nell’andare a determinare lo sviluppo del comportamento sono state rapidissime e tra le più significative della medicina, con importanti ricadute sui trattamenti erogati agli utenti. Inoltre, tra le aree omogenee della Fondazione, l’Area Salute Mentale è l’unica ad avere un doppio mandato non derogabile territoriale e ospedaliero; è anche l’unica tra gli ospedali cittadini a dover trovare modalità per articolare tale mandato in modo innovativo, per la necessità di conciliare la ricerca e l’intervento di 3° livello, tipici di un IRCCS, con gli interventi di comunità e la presa in carico di lungo periodo nel territorio. Si tratta di un compito molto complesso (e forse impossibile), che solo in pochissime realtà nazionali e internazionali è stato affrontato.

I risultati sembrano promettenti. Il radicamento nel tessuto sociale e il mandato sulla salute della popolazione di un territorio obbligano infatti ad uno sguardo di insieme e a un’ottica di rete e di area vasta, che consentono di identificare tempestivamente i nuovi bisogni emergenti. Lo stretto raccordo con la ricerca e la formazione di 3° livello consente poi di avere strumenti per analizzare quanto identificato e per progettare risposte cliniche e organizzative innovative, di sperimentarne l’efficacia nella pratica clinica, di diffondere rapidamente quanto appreso garantendone l’effettiva trasferibilità in contesti più ampi, migliorando continuamente appropriatezza e accettabilità degli interventi.

**Luigi Macchi**

Direttore Generale  
della Fondazione IRCCS Ca’ Granda  
Ospedale Maggiore Policlinico di Milano

AA.VV.: Le gravi disabilità della comunicazione: i bisogni dei pazienti (e delle loro famiglie)

► **PAOLO**

**(Lucia Lanzini introduce il video di apertura preparato con Paolo)**

*Paziente*

Vi presento la testimonianza di Paolo rispetto alla sua esperienza con la Comunicazione Aumentativa (CAA).

Paolo ha preferito non essere presente qui oggi perché è un ragazzo che si emoziona facilmente e questo lo avrebbe penalizzato nell'uso del comunicatore, ma ha voluto comunque proporci il suo racconto attraverso un video.

Preparare con lui questa video testimonianza non è stato facile, questo evento lo ha coinvolto, e gli ha fatto ripercorrere mentalmente alcuni momenti importanti della sua vita: il senso che ha avuto per lui l'intervento di CAA, l'aver frequentato con impegno e piacere la scuola superiore, l'esame di maturità, la borsa di studio, l'inserimento allo SFA (Servizio Formativo per le Autonomie) nel suo paese di residenza.

Paolo, affetto da tetraparesi spastico-distonica, è arrivato al Centro Sovrazonale di CAA di Verdello all'età di 16 anni. Il percorso di CAA è stato un'evoluzione naturale di quello che aveva sempre cercato di mantenere vivo dentro di sé: la forza e la determinazione nel voler dire delle cose, nel mantenere forti le proprie idee, nonostante l'ambiente circostante non lo avesse mai favorito effettivamente.

Fin dalla valutazione Paolo ha espresso chiaramente i propri bisogni comunicativi, che erano essenzialmente comunicare con genitori, compagni, insegnanti, amici, mentre non era interessato a leggere e a scrivere perché riteneva il processo troppo faticoso.

Paolo ha accettato di usare un comunicatore ad uscita in voce con 40 messaggi su 8 livelli a scansione, che attiva attraverso un sensore posizionato sulla parte destra del poggiatesta della sua carrozzina.

Le parole e le frasi che usa vengono prima concordate con lui e solo dopo possono essere registrate.

Attraverso i sistemi di comunicazione Paolo ha saputo imporre la propria identità, esprimendo sempre bisogni, preoccupazioni o pareri riguardo la sua salute, la sua istruzione, il suo futuro. A partire dall'età di 17 anni infatti ha deciso di partecipare a tutti gli incontri che si sono tenuti presso il servizio di neuropsichiatria tra gli operatori di riferimento, la scuola e la famiglia, per poter esprimere il proprio parere.

Oggi Paolo ha 26 anni e da oltre 5 è dimesso dal Servizio NPIA. Vive con la madre che si occupa di lui in assenza di una rete istituzionale di supporto.

La preparazione all'intervista è stata un percorso che ha coinvolto molto sia lui che la famiglia, con impegno e disponibilità.

Forse alcuni di voi non conoscono cosa significhi parlare con uno strumento che funziona a scansione: sulla tastiera del comunicatore è presente un indicatore luminoso che procede automaticamente di simbolo in simbolo (a cui corrispondono le parole registrate); quando la luce si posiziona sul simbolo prescelto Paolo dà un segnale di conferma schiacciando il sensore con la testa, che produce l'uscita del messaggio preregistrato.

La scansione è faticosa, bisogna saper aspettare, mantenere fermo il pen-

*I bisogni di Paolo:  
comunicare,  
non scrivere né leggere.*

*Il comunicatore  
permette di comunicare  
ma non senza una  
certa fatica e un certo  
impegno cui Paolo non  
si è mai tirato indietro.*

**ARGOMENTO**

siero che si vuole esprimere, tenere sotto controllo le distonie e infine riuscire ad attivare il sensore solo al momento giusto.

A volte succede che si schiacci il tasto prima o quello dopo, per cui escono per errore parole non pertinenti al discorso.

Paolo conosce molto bene il suo comunicatore, ha trovato le strategie per tollerare questa fatica e ha imparato a non rinunciare.

Per noi invece è stata faticosa la scelta delle parole e delle frasi che Paolo voleva dire: a volte dovevano essere riformulate affinché fossero come le voleva lui; altre volte abbiamo registrato frasi intere per facilitarlo nell'esposizione da fare in questi pochi minuti.

Ora lascerei la parola a Paolo...

(il video: <https://docs.google.com/file/d/0B1jVQbz7DJPVb1pDVmZGcXlOTlk/edit?pli=1>).

**► ANNA SEGHEZZI**

*Genitore*

Il mio intervento ha un'obiettivo ben chiaro. Vi presento innanzitutto Stella, la mia bimba di cui sono molto orgogliosa: ha 7 anni e frequenta la seconda elementare. Una delle più gravi disabilità per Stella è la comunicazione e per questo motivo ci è stato proposto di partecipare a questo progetto regionale, quando frequentava il secondo anno di scuola dell'infanzia e aveva 4 anni.

Oggettivamente, ve lo dico da mamma, Stella ci ha seguito, ha raccolto sempre quanto le veniva proposto con i suoi modi: Stella è una bambina che ha un ritardo cognitivo importante e non parla. A tre anni non parlava, a 4 non parlava; oggi qualcosina dice. La CAA l'ha aiutata e l'ha supportata in una maniera veramente importante. Quando vede i simboli Stella risponde come dovrebbe, quando vede le sue strisce le parole escono e si riescono a mettere insieme, quindi l'aiutano anche nell'espressione verbale. Stella negli anni, oramai questo è il terzo che utilizza la CAA, è passata dalla scuola dell'infanzia a quella elementare e quindi nei vari passaggi ha portato con sé questo bagaglio importante. L'ha aiutata e per noi è uno strumento di orgoglio. Stella stessa è diventata nel suo gruppo di classe un potenziale importante, quindi la CAA per lei è diventata strumento di integrazione. Noi genitori fin dall'inizio siamo partiti con i corsi di formazione e sottolineo una cosa: partecipare a questo progetto è percorrere una strada che via via si allarga e tutti noi dobbiamo diventare esperti, genitori esperti, insegnanti esperti, tecnici esperti. Intendo dire che la CAA rompe le regole, al momento qua siamo tutti uguali, nessuno è esperto in CAA quando si comincia, ma si deve diventare esperti strada facendo perché è indispensabile p. es. diventare non solo lettori di libri, ma semplificatori; non è una cosa da poco e i genitori lo devono diventare.

Quindi gli esperti di CAA sono una risorsa per le persone che incontrano, che a loro volta hanno qualcosa da imparare anche dal genitore. Voi siete tutti tecnici, operatori, professionisti, medici, ma di esperti sulla CAA qui ne vedo pochi. Tutti noi dobbiamo diventare esperti per preparare gli strumenti del

*La CAA è diventata per Stella strumento importante di integrazione.*

AA.VV.: Le gravi disabilità della comunicazione: i bisogni dei pazienti (e delle loro famiglie)

bambino, non dei bambini, ma del singolo bambino, quindi ogni strumento è diverso dall'altro, ogni libro deve diventare diverso dall'altro. Il libro di Cenerentola per Stella è diverso. Tutte queste cose si imparano, però c'è una cosa che va oltre i ruoli, oltre la professionalità e l'esperienza ed è la capacità di lavorare insieme e questa cosa non ve la insegna nessuno. O l'avete o l'imparate se volete lavorare con la CAA altrimenti non si va avanti, è proprio il pre requisito che se non c'è fa fallire il progetto.

La famiglia da sola può fare poco: servono le competenze e la disponibilità di tutti. Quando vedi che il tuo bambino risponde alle sollecitazioni della CAA tu vuoi andare avanti e ti devi tirare a bordo le persone che stanno con la tua bambina dalla mattina alla sera: la scuola! Sta più ore a scuola che con noi e gli strumenti che usa a scuola li deve poter condividere con la mamma. Il bambino non sa parlare? E allora ci siamo inventati il diario quotidiano. Stella ci porta a casa quello che ha fatto a scuola, il momento principale, un'emozione. Qui parliamo di emozioni perché il bambino parla per emozioni a quell'età, Stella ha infatti 7 anni.

Quindi ti deve portare a casa quello che ha fatto di giorno, ha giocato con una bambina, ha sporcato con lo yogurt l'altro bambino, e lei me lo racconta con i simboli quindi la stessa cosa che fa nel weekend con la mamma e il papà la racconta il lunedì come fanno gli altri bambini. Tutte queste belle cose devono avere un linguaggio unico, i simboli devono essere gli stessi utilizzati da tutti.

*La famiglia da sola può fare poco: c'è bisogno di tutti.*



“Insieme” è uno! Eppure ti viene proposto in modi diversi; quindi ci dobbiamo mettere d'accordo su quale utilizzare. Il Centro Sovrazonale ci dà le linee guida e noi ci dobbiamo mettere d'accordo, altrimenti se io a casa utilizzo per “insieme” il simbolo con i tre cerchi e a scuola si utilizza invece la manina è come se il cucchiaio lo chiamassi cucchiaio a casa e a scuola lo chiamassi scopa. È un po' difficile.

Il Gruppo è veramente la cosa necessaria per andare avanti perché è un tema che in questi tre anni ha avuto per noi nelle varie fasi e passaggi diverse difficoltà, tuttora presenti.

Sono importanti: la fiducia, la collaborazione e la disponibilità, la divisione dei compiti in relazione alle caratteristiche di ognuno e la tempestività, la velocità di condivisione dei materiali e delle strategie.

Diamo dei crediti agli altri, diamo fiducia anche se non è esperto e bravo come noi, anche se non è professore. Sulla CAA stiamo diventando tutti esperti, stiamo facendo un percorso insieme. Anche la collaborazione non è così scontata. Noi la chiediamo, la bambina la chiede e abbiamo il dovere di offrirla. La divisione dei compiti sembra banale, ma se uno è bravo a fare una cosa e l'altro è bravo a farne un'altra dividiamoci i compiti e tutto verrà

*Ci vogliono fiducia, collaborazione, suddivisione dei compiti e delle competenze.*

## ARGOMENTO

più velocemente, perché un altro degli elementi importanti è la velocità nel preparare le cose.

Stiamo parlando di CAA e del fatto che dobbiamo diventare tutti esperti, e tutte le insegnanti devono essere a bordo come tutto il servizio specialistico che fa parte del gruppo di Stella. Quindi è necessaria la formazione in CAA per tutti gli insegnanti. Non è che una volta formato l'insegnante di sostegno (Stella ha il sostegno di una insegnante dedicata) basta; formata l'assistente basta; no stiamo parlando di inclusività che significa che tutta la classe deve essere a bordo compresi le insegnanti, i genitori, i bambini. Succede quindi che tutti i bambini della classe utilizzano i libri di Stella, se li rubano, tutti li condividono. Le maestre mi raccontano che i bimbi vogliono andare vicino a Stella per leggere il libretto. La classe di Stella è praticamente tappezzata di simboli e sono gli stessi bambini che dicono alla maestra cosa c'è scritto, vogliono che la maestra stessa cadenzi gli altri bambini, così Stella li segue. All'inizio dell'anno la scuola ha presentato a tutti i genitori della seconda questo nuovo modo di comunicare in condivisione e per me e per tutti i genitori è stato un momento forte. I genitori di un bambino gravemente disabile devono fare i conti con i giudizi degli altri genitori, p. es. per la paura che si possa rimanere indietro con il programma per la presenza della bambina disabile, e invece no, tutti assieme, tutti a bordo, con strumenti che è scientificamente provato che portano avanti tutta la classe.

La classe si deve muovere in sintonia e le insegnanti devono far sentire tutti protagonisti, e la CAA fa diventare il bambino protagonista: il bambino che non è stupido, ma che ha bisogno di qualcosa in più, e che sa dare qualcosa in più. L'importante è rendere tutti più consapevoli di quante modalità ci sono per comunicare. Spiegare anche ai genitori quanti modi diversi ci sono per comunicare e quanto sono utili per tutti non è proprio cosa da poco: la CAA offre anche questo.

Un altro elemento essenziale del gruppo è la UONPIA territoriale, che ha il ruolo determinante di trascinare tutti. La UONPIA deve essere strutturata per dare il giusto e il doveroso supporto al gruppo che territorialmente deve essere presente perché è sul territorio che c'è il bisogno. Noi dobbiamo costruire il futuro dei nostri bambini. Io vedo il futuro di Stella, adesso faccio il possibile, ma devo preparare il suo futuro; mi dà da fare, ma se non sono supportata non posso. Servono i mezzi necessari e gli investimenti adeguati.

È nostro dovere di genitori impegnarci, ma è dovere anche della UONPIA territoriale e di tutte le scuole. Dobbiamo investire perché sia l'ambiente a

*È necessaria la formazione in CAA per tutti gli insegnanti, e non solo.*

*Elemento essenziale del percorso è la UONPIA.*



**Luca Fumagalli, Elisabetta Reicher,  
Paolo Tatavitto, Junglelink**

*Storie con la CAA*

*Tre IV-book per bambini di 3-6 anni:*

*Paolo e i capelli ribelli, Anna e l'altalena,  
Luigi e il minestrone.*

Centro Studi Erickson, Trento, 2012  
cofanetto con 3 storie a colori

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crescere con i nostri figli. Stella ha solo 7 anni ma raggiungerà quell'età in cui i ragazzi vengono "scaricati" dal servizio e lasciati soli con le loro famiglie. Per questo motivo, è necessario lavorare oggi per preparare loro un futuro dignitoso e creare la rete di conoscenze.

Io sto facendo il possibile, ma chiedo l'impegno di tutti per far crescere l'ambiente insieme ai nostri bambini. E per questo Stella ringrazia.

► **MONICA SOZZI**

*Neuropsichiatra*

Faccio la neuropsichiatra a Salò. La mia partecipazione al progetto per il primo anno è stata proprio la risposta al desiderio di creare una équipe in una neuropsichiatria infantile di provincia per poter rispondere ai bisogni di bambini come Stella. La nostra partecipazione è stata complicata fin dall'inizio: il primo problema è stato quello di identificare un paziente con cui intraprendere il percorso. Valutando tutti i bambini che afferiscono al nostro servizio, ci sembrava che nessuno avesse i requisiti per poter accedere al progetto. Tuttavia il problema è soprattutto di natura ambientale cioè la necessità di attivare e mettere in rete la famiglia, la scuola, il servizio intorno al bambino.

Dopo una riflessione accurata abbiamo scelto Giorgio. Giorgio ha 12 anni e un disturbo generalizzato dello sviluppo; ha appena terminato la V classe primaria quando decidiamo di partire per questa avventura e fino a questo momento è stato esposto a metodi cognitivo-comportamentali. Giorgio è in grado di usare il linguaggio verbale però non riesce a usarlo in modo comunicativo; esprime qualche bisogno primario con frasi stereotipate. Quindi la proposta di un lavoro che miri a sviluppare la comunicazione trova concordi i genitori che ovviamente desiderano che lui riesca a comunicare meglio. Nel contempo lui sta iniziando la scuola media quindi dalla scuola non possiamo ottenere altro se non una generica dichiarazione di collaborazione mancando la continuità educativa con l'anno precedente. Gli insegnanti dovranno imparare a conoscerlo e a capire come funziona. La famiglia accetta di partecipare volentieri, però conosce poco degli strumenti informatici, caratteristica questa condivisa anche dagli operatori del servizio. Anche noi siamo abituati a usare la tastiera del computer per scrivere delle relazioni, ma quando si tratta di prendere dimestichezza con questi sistemi siamo un po' in difficoltà. Siamo partiti con il progetto a ottobre e il programma informatico è arrivato ad aprile dell'anno dopo; nel frattempo ci sono stati molti disguidi nel tentativo di usare le versioni demo e quindi ci siamo limitati a scrivere dei testi. Solo più tardi l'insegnante di sostegno, con grande impegno, ha fatto tanti libri adatti alla condivisione con la classe quindi libri modificati che fossero più fruibili.

Anche per quanto riguardava gli aspetti esecutivi tutto il lavoro di riquadratura, la scelta dei simboli, gli aspetti più tecnici ci hanno messo molto in difficoltà e ci siamo resi conto che soprattutto in fase di apprendimento è necessario tanto tempo ed è necessario trovarlo al di fuori dell'orario di lavoro.

*La questione principale è mettere in rete: la famiglia, la scuola, i servizi.*

*Molte delle difficoltà stanno nelle questioni tecniche legate al mezzo.*

## ARGOMENTO

Il fattore di maggiore criticità è stato però il particolare periodo di vita che sta attraversando Giorgio, caratterizzato da cambiamenti profondi a cui il ragazzino fatica ad adattarsi. Dopo poche settimane dall'ingresso alla scuola media iniziano a presentarsi problemi di comportamento che divengono sempre più eclatanti, difficili da gestire, fino a generare da parte della scuola timore nei confronti del ragazzino e da parte dei genitori sfiducia negli insegnanti. La famiglia ha anche un vissuto di timore nei confronti dell'eventuale utilizzo di farmaci ed è quindi pressante il bisogno di tutti di trovare soluzioni rapide che purtroppo sono raramente possibili, generandosi ulteriore confusione e aggravando nel tempo il malessere di Giorgio. In pochi mesi le reali possibilità di collaborare attivamente sul progetto da parte di scuola e famiglia vengono meno a causa dell'aggravarsi dei problemi comportamentali del ragazzino e gli operatori del servizio restano soli a continuare questo lavoro. In questo contesto così difficile si colloca la visita a Milano. Famiglia e operatori insieme (la scuola ormai non è più presente) si trovano a portare desideri e preoccupazioni. Questo momento si colloca come uno spazio di ascolto neutro molto importante, dove Giorgio dimostra di avere capacità e curiosità e di poter provare piacere nella lettura di un libro e nella condivisione di attività, ma anche di essere molto fragile, in una condizione di equilibrio molto precario. Dopo una prima parte dell'assessment positiva che evidenzia tutte le potenzialità di Giorgio, si scatena una crisi di agitazione e di etero aggressività importante diretta verso tutti: il medico con cui Giorgio aveva stabilito un ottimo rapporto, il papà e la mamma.

Entrano così in scena anche tutte le difficoltà di Giorgio; è un'esperienza molto forte per tutti. La prima parte dell'incontro è un'esperienza di accoglienza e di contenimento, poi diviene un'esperienza difficile per la preoccupazione che Giorgio si faccia male e che possa ferire il padre. La possibilità di guardare insieme il problema e di approfondire aspetti importanti legati alla sua comprensione linguistica nelle situazioni in cui l'ansia sale, condividendo soluzioni reali e percorribili, ha reso comunque l'esperienza positiva in attesa di un contesto accogliente. È stata preziosa perché ha fatto cadere le barriere di tutti e consentito di condividere le diverse conoscenze di Giorgio e gradualmente portare ad una svolta importante, con una maggiore integrazione tra i diversi aspetti e la possibilità di costruire un'alleanza tra noi operatori e la famiglia. Oggi Giorgio sta meglio grazie all'integrazione tra un progetto educativo coerente, una farmacoterapia mirata, una nuova scuola e una positiva collaborazione tra tutte le persone attorno a lui. Abbiamo voluto portare questa esperienza così difficile per esprimere la grande fatica che abbiamo vissuto nell'attivare un'intervento con un ragazzino dell'età di Giorgio quando le necessità urgenti e tutte le energie di famiglia e scuola sono rivolte al contenimento delle emergenze. È stato molto difficile per tutti entrare in un'ottica di messa in campo di modalità rivolte alla prevenzione dei comportamenti disfunzionali e al sostegno alla comunicazione e alla comprensione verbale in questa situazione di urgenza. È stato anche faticoso cogliere il valore della formazione e nessuno è riuscito ad investire energie nella costruzione e condivisione dei libri in google group.

Noi come operatori vorremmo partecipare a futuri progetti regionali e, tenendo conto dell'esperienza vissuta lo scorso anno, abbiamo provato ad in-

*Uno spazio di ascolto neutro è molto importante nel lavoro con ragazzini come Giorgio.*

*È importante prevenire i comportamenti disfunzionali e sostenere la comunicazione.*

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dividuare una situazione diversa; ci siamo imbattuti in problematiche forti: lavorando sul lago di Garda in Val Sabbia, gli utenti del nostro servizio sono in gran parte o extra comunitari o persone in condizioni di difficoltà familiari ed economiche, persone che non hanno una sicurezza del posto di lavoro tale da consentire loro di ottenere i dieci giorni di permesso per frequentare il corso a Milano. Il corso è molto impegnativo, le nostre famiglie per lo più non sono nelle condizioni di investire tempo e risorse per la costruzione dei libri e degli strumenti e in questo modo sono escluse a priori da questa possibilità. Le scuole del nostro territorio sono distribuite su 43 comuni e sono pochissimi gli insegnanti che si trovano in una condizione di stabilità professionale che permetta loro di attuare un progetto di lavoro per l'intero anno scolastico. Inoltre per molti di loro Milano è considerata una meta lontana per poter far fronte all'impegno della formazione.

Altro aspetto che abbiamo verificato come problematico è la scarsa conoscenza della CAA da parte delle scuole, delle famiglie, e talora anche di alcuni operatori della rete del territorio. La CAA viene vissuta ancora come alternativa al linguaggio verbale, oppure viene spesso confusa con la comunicazione facilitata. Tali difficoltà portano il nostro gruppo di operatori a formulare la richiesta di partecipare a prossimi percorsi formativi nell'ambito del progetto regionale anche aggregandosi ad altri gruppi di lavoro. Pensiamo che la formazione nostra come operatori sia un percorso fondamentale per poter poi incidere e operare sulla nostra realtà territoriale e, crediamo, il primo passo molto importante.

*Si conosce ancora molto poco la CAA, sia nella scuola, che nelle famiglie.*

► **ALESSANDRA CIANELLA**  
*Neuropsicomotricista*

La prima esigenza che abbiamo osservato dal punto di vista del servizio di neuropsichiatria è quella di poter trasferire l'approccio di CAA all'interno di tutti i setting terapeutici e riabilitativi. Prima dell'adesione al progetto regionale infatti alcuni operatori lavoravano già in CAA, ma gli interventi si appoggiavano su quei singoli operatori rendendo circoscritto l'intervento. Al contrario con l'adesione al progetto regionale e grazie anche alla formazione sul campo è stato possibile sensibilizzare le colleghe meno esperte in CAA, riconoscere quali potessero essere i bisogni dei bambini con una disabilità comunicativa e attivarsi quindi con gli strumenti e un progetto di CAA mirato per quei bambini.

La seconda criticità che osserviamo è quella delle limitate risorse del servizio dedicate alla CAA. Un nuovo progetto regionale dovrebbe coinvolgere nella formazione più operatori e dovrebbe garantire una supervisione dei progetti di CAA che sono già stati avviati.

Il primo bisogno della persona che possiamo osservare noi terapisti nel corso della seduta è quello di offrire maggiore opportunità di comunicazione ai bambini che abbiamo in trattamento. Questo è stato possibile rendendo più sensibili tutti gli operatori che lavorano all'interno del servizio di neuropsichiatria sui bisogni comunicativi dei bambini che già abbiamo

*Le scarse risorse dedicate alla CAA rappresentano un grave limite.*

**ARGOMENTO**

in trattamento. Rendendo più attenti i partner comunicativi, si è data la possibilità di ascolto a bambini che prima a volte passavano inosservati. Vi porto l'esempio di una bambina il cui vocalizzo è stato possibile generalizzare in tutti i contesti di terapia come segnale comunicativo di assenso. La cosa più importante è che adesso finalmente qualcuno le pone delle domande, alle quali può rispondere con il suo vocalizzo che adesso viene riconosciuto come segnale per il sì.

Un altro aspetto è quello di rendere l'ambiente che circonda il bambino più comprensibile al bambino stesso; e questo per esempio è stato possibile nel caso di un bimbo in trattamento con il disturbo generalizzato dello sviluppo che presentava delle forti crisi comportamentali durante la seduta, e in particolare al termine. È stato possibile contenere queste forti crisi comportamentali semplicemente inserendo nell'agenda una striscia delle attività pertinenti la seduta stessa.

Per quanto riguarda i bisogni della famiglia, che spesso le mamme riportano, sono innanzitutto di poter comprendere meglio il loro bambino, di poter comprendere i bisogni primari del bambino: se ha fame, se ha sete e soprattutto se ha male da qualche parte.

Un'altra esigenza che viene dalla famiglia è quella di poter comunicare attraverso un codice condiviso in tutti gli ambienti di vita quotidiana del bambino. Per esempio di poter raccontare, di poter comunicare con il proprio bambino dando al figlio la possibilità di raccontare quello che è stato fatto a scuola.

Infine un altro bisogno che viene dalla famiglia è quello di poter coinvolgere maggiormente la scuola. Nella realtà del mio territorio alcune scuole si sono attivate richiedendo una formazione in CAA, altre scuole faticano ancora ad aderire rispetto ai progetti di CAA anche per difficoltà di risorse umane.

*L'ambiente dove il bambino agisce deve essergli il più comprensibile possibile.*

**► NADIA MORTONI**

*Insegnante*

Sono un'insegnante di scuola primaria, in possesso del titolo di specializzazione per attività di sostegno, da anni referente per l'inclusione nell'Istituto Comprensivo (con alunni dai 3 ai 14 anni) di Fino Mornasco (Como).

Ringrazio fin da ora per la novità rappresentata dalla possibilità offerta da questo convegno a persone della scuola di portare alcune osservazioni, sensazioni, problematiche che si vivono quotidianamente nei nostri luoghi di lavoro, proprio in un momento in cui alla scuola viene chiesto, ai sensi della recente normativa sui Bisogni Educativi Speciali (BES) di attrezzarsi per l'inclusione di tutti e di ognuno.

Le osservazioni che esplicherò sono frutto non solo di una riflessione personale, ma di momenti di confronto con i colleghi, con le famiglie, con i sanitari e operatori vari.

► Il personale in servizio spesso non è formato rispetto alle particolari esi-

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genze di alcuni alunni e ad alcune strategie o modalità d'intervento a loro favore (veramente basso l'indice di presenza di docenti specializzati sulle problematiche legate a BES). I docenti di nuova formazione spesso lo sono, ma l'età media degli insegnanti è piuttosto elevata per mancanza di turn over. Non si chiede la presenza di più insegnanti di sostegno, ma la formazione sull'inclusione per quelli curricolari!

- ▶ La gestione di problematiche complesse spesso crea ansia per la mancanza di conoscenza: a volte è sufficiente il contatto con "chi ne sa di più" per rendere tutti più disponibili poiché "a conoscenza".
- ▶ È importante attivarsi per tempo rispetto all'inserimento di bambini con problematiche forti, che richiedono impegno e sforzo di programmazione: l'aver a disposizione il tempo per riflettere, per "cercare", consente di muoversi su più piani, favorendo l'individuazione di soluzioni che il poco tempo o la fretta non consentono di cogliere, a discapito di tutti.
- ▶ Spesso appare utile il coinvolgimento preventivo di Dirigenti Scolastici o referenti per l'integrazione, ancor prima dei docenti direttamente coinvolti nell'accoglienza dell'alunno e del suo progetto di vita. Tale approccio preventivo va, anche in questo caso, nell'ottica di preparare l'accoglienza per il team docente, presentando già possibili soluzioni d'inserimento e di appoggi esterni per favorire l'approccio anche all'uso della CAA.
- ▶ Sono importanti le "reti" più o meno ampie, più o meno strutturate: la loro dinamicità e varietà possono diventare davvero una risorsa fondamentale in un momento di congiuntura faticoso per tutti. Il poter contare su abilità e sensibilità diverse è certamente un valore aggiunto. Contare su:
  - la famiglia, vista come una risorsa, poiché può fornire chiavi di accesso, materiali, informazioni che i docenti poi rielaboreranno ad uso e consumo della specificità della scuola,
  - gli educatori, non visti come qualcuno cui affidare il bambino con BES quando non si sa cosa fare, ma come coloro che offrono spunti per accoglienza, approccio diversi,
  - i sanitari dai quali attingere la conoscenza di abilità residue da potenziare per lo sviluppo e la crescita del bambino con BES,
  - i terapisti, per sperimentare cosa sarà trasferibile o potenziabile nell'attività in classe.

Il tutto nella definizione e nel rispetto della specificità dei ruoli di ognuno, senza cadere nell'errore dell'onnipotenza che genera aspettative non adeguate e demotivanti.

- ▶ È importante condividere la necessità del diverso modo di comunicare di alcuni con le famiglie degli altri bambini e con il resto dei compagni.

In alcune realtà, si è sperimentata la presentazione del senso e delle modalità legate alla CAA (già dalla classe seconda di scuola primaria) con risultati davvero apprezzabili di conoscenze e di condivisione tra gli alunni.

*È importante poter programmare con serenità e tempo l'inserimento di bambini con problematiche forti.*

*Si deve poter contare su famiglia, educatori, sanitari e terapisti.*

## ARGOMENTO

## ▶ AMBROGINA PIROLA

*Pediatra di famiglia*

Lavoro a Muggiò da 24 anni, sono in gruppo con altri due colleghi e la caratteristica che ci distingue un po' rispetto agli altri pediatri che lavorano in gruppo è che abbiamo scelto di mettere la sede del nostro ambulatorio all'interno del Distretto Socio-sanitario.

Questo vuol dire che lavoriamo a stretto contatto con il consultorio familiare, l'UONPIA, gli assistenti sociali, gli psicologi, l'Ufficio d'Igiene, e gli amministrativi.

Una soluzione che ci facilita nei rapporti con questi interlocutori ai quali va la nostra gratitudine. Inoltre, il fatto di lavorare nel distretto facilita la vicinanza anche con la scuola e con tutti i servizi riabilitativi e di supporto presenti nel nostro distretto.

Muggiò è un paese piccolo, per cui le mamme dei nostri pazienti a volte sono le insegnanti, le terapisti, le figure professionali che lavorano con i nostri pazienti; così quando vengono in ambulatorio risulta facile parlare anche di altre cose e quindi allargare un po' la conoscenza di certi aspetti che solitamente un medico riesce a sapere con difficoltà. Certi pazienti ci vengono già presentati dal consultorio familiare o dagli assistenti sociali quando "sono ancora in pancia", di solito sono quelli più critici, quelli più sfortunati.

Spesso, noi della pediatria di gruppo di Muggiò, veniamo etichettati come quelli a cui piace il sociale, ma occuparsi del bambino che ha problemi, del bambino che ha difficoltà prendendolo in carico in modo globale è importantissimo, anche se veramente impegnativo.

Ci vuole tempo, attenzione e, se posso dire, anche con un po' d'orgoglio: sono contenta di come a volte riusciamo a organizzare il nostro lavoro sul territorio e anche dopo tanti anni mi piace ancora tantissimo lavorare come pediatra di famiglia. In definitiva posso affermare che abbiamo realizzato un buon modello di assistenza e di cura perché siamo in grado di coordinare e ottimizzare le risorse disponibili sul territorio.

Lavorando nel distretto se per esempio mi capita di dover inviare un bambino per la fisioterapia posso averla tutti i giorni... sono al piano di sopra! Così in poco tempo posso organizzare un accesso facilitato anticipando il problema e le caratteristiche del paziente e della famiglia che visiteranno.

Molti dei bisogni e dei problemi che possono avere i nostri pazienti, li semplifichiamo garantendo per quanto possibile una buona comunicazione tra i vari servizi.

Sapete tutti che ogni pediatra ha in carico circa 1000 pazienti, non sono pochi. Nei nostri ambulatori arrivano genitori di tutti i tipi, di tutte le estrazioni sociali e di tante etnie.

Il compito del pediatra di famiglia è quello di organizzare un percorso di cura ottimale per ogni paziente a seconda delle risorse che abbiamo a disposizione. Quando lavoro e ho un problema mi chiedo sempre: che cosa ho a disposizione? Cosa posso fare? La risposta è sempre: il massimo per questo bambino.

Il pediatra di famiglia, quando prende in cura un bambino, apre una cartella clinica e nell'anamnesi comincia a valutare oltre al bambino anche il tipo di famiglia, perché quando incontriamo un nuovo paziente sappiamo che non prendiamo in cura solo il bambino, ma tutta la famiglia... i parenti, ed è questo il grosso problema.

*Prendere in carico globalmente il bambino con problemi è fondamentale.*

*Il pediatra di famiglia deve delineare e organizzare un percorso di cura ottimale per ogni singolo paziente.*

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Il paziente viene impostato e organizzato con l'aiuto di visite filtro, bilanci di salute, prevenzione, screening, diagnosi, cura, e anche molti consigli pratici.

All'interno del proprio ambulatorio ogni pediatra si organizza come gli è più congeniale e nel tempo ognuno ha affinato una sua tecnica personale che lo porta a lavorare bene.

Quando i genitori arrivano con il loro neonato non hanno il libretto delle istruzioni da consultare... hanno quindi bisogno di una figura professionale che li aiuti nei loro problemi.

Il bambino con patologia cronica può avere problemi presenti alla nascita o dare i primi segni a un mese, a quattro, a sei o anche più avanti. Il poter avere un canale veloce e aperto con colleghi competenti e disponibili è rassicurante per il pediatra che lavora sul territorio.

Dal canto nostro, adottiamo anche delle strategie per ottimizzare la crescita di questi bambini, dalla banale posizione in culla, al non fumare in casa, al massaggio del bambino, al progetto Nati per Leggere che è un rinforzo affettivo che si crea tra chi legge e chi ascolta.

Ci sono sicuramente azioni migliorabili e lo sappiamo tutti, una delle cose che potremmo fare è saperne di più sulla CAA (la UONPIA di Muggiò è stata coinvolta in questo progetto di intervento di CAA e da due anni sta lavorando con una paziente della nostra pediatria di gruppo). La CAA deve raggiungere un po' tutti i pediatri.

Quindi noi vorremmo saperne di più, essere più esperti di CAA.

Mi piace raccontare un fatto successo all'inizio della mia carriera di pediatra. Lavoravo alla Nostra Famiglia di Como, stavo visitando in ambulatorio quando vengo chiamata in urgenza perché una ragazzina affetta da tetraparesi spastica che veniva al centro per fare della fisioterapia si era sentita male. Lascio immediatamente il mio lavoro e corro da lei. La ragazzina aveva la febbre, la visito, prescrivo, spiego come deve essere somministrata la terapia e torno al mio ambulatorio ma non ho chiesto nulla dell'età, se frequentava la scuola...

Tutto in poco tempo, perché mi ero allontanata per l'urgenza da un altro paziente. Mi sentivo di avere fatto una visita tecnicamente perfetta e anche in modo simpatico, diagnosi di tonsillite e terapia corretta. Così sono rientrata e ho continuato il mio lavoro.

Il giorno dopo, trovo un pacchettino sulla scrivania da parte della ragazza visitata il giorno prima. Apro e trovo un libro. Un libro che ha scritto lei. La ragazzina frequentava l'università, filosofia. Solo in quel momento mi sono chiesta: ma ieri forse ho fatto qualcosa di sbagliato? Come mi sono comportata?

Poi a casa lo leggo. Una raccolta di poesie. A quei tempi i disabili scrivevano con un puntatore appiccicato alla fronte schiacciando i tasti del computer.

La ragazza, nel libro raccontava di quando era fuori a passeggio con la carrozzina spinta dalla mamma. Gli sguardi della gente la guardava, rideva, la ignorava. E allora sono andata un po' in crisi. Certo, il libro mi era stato regalato perché mi voleva ringraziare. Anche se i colleghi mi avevano detto che ero stata molto carina e che lei era contenta di me... Ebbene io ho colto che con quel libro lei mi voleva trasmettere la necessità di un'attenzione diversa, particolare. Un'attenzione tanto più necessaria quanto più la persona è disabile e ha problemi di comunicazione.

Grazie!



**Maria Antonella Costantino**  
*Costruire libri e storie con la CAA.*  
*Gli IN-book per l'intervento precoce e l'induzione*  
Centro Studi Erickson,  
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<http://crc.marionegri.it/bonati/adhdnews/subscribe.html>

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"Condivisione dei percorsi diagnostico-terapeutici per l'ADHD in Lombardia".