

# NEWSLETTER



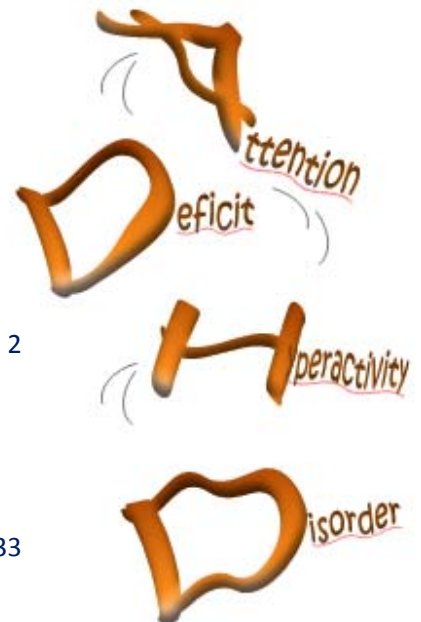
## INDICE:

1. Bibliografia articoli ADHD
2. Segnalazioni
  - Iniziative dell'Istituto di Psicologia e Psicoterapia Comportamentale e Cognitiva (IPSICO):  
**VII edizione del Master annuale "L'APPROCCIO COGNITIVO-COMPORTAMENTALE AI DISTURBI DELL'ETA' EVOLUTIVA";**
  - Il edizione del corso gratuito di formazione:**  
"Il disturbo ossessivo-compulsivo: modelli di comprensione e strategie di trattamento cognitivo-comportamentali"

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**BIBIOGRAFIA ADHD DICEMBRE 2010**

Pediatrics. 2010;126:e1425-e1429.

**LEARNING AND ATTENTION PROBLEMS AMONG CHILDREN WITH PEDIATRIC PRIMARY HYPERTENSION .**

**Adams HR, Szilagyi PG, Gebhardt L, et al.**

**OBJECTIVE:** The objective was to determine whether children with sustained primary hypertension are at increased risk for learning disabilities (LDs), as a school-related manifestation of neurocognitive problems.

**METHODS:** A total of 201 children 10 to 18 years of age who were referred because of elevated blood pressure (BP) were included. Patients were categorized as having or not having hypertension, on the basis of BP evaluation at the initial hypertension clinic visit and subsequent confirmation of sustained elevated BP outside the clinic setting. Parents reported whether their child had a provider-confirmed LD or attention-deficit/hyperactivity disorder (ADHD).

**RESULTS:** A total of 101 children without hypertension and 100 children with hypertension were evaluated; 18% of the children (n = 37) had LDs. In comparison with children without hypertension, children with hypertension were significantly more likely to have LDs (18% vs 9%; P < .001), irrespective of comorbid ADHD. With adjustment for demographic variables and obesity, the odds of having LDs were elevated for subjects with hypertension, in comparison with subjects without hypertension (odds ratio: 4.1 [95% confidence interval: 1.8-9.4]).

**CONCLUSIONS:** The rate of LDs, with or without ADHD treatment, was significantly higher for children with sustained primary hypertension, compared with children without hypertension. These findings add to the growing evidence for an association between primary hypertension and cognitive function and may inform treatment and monitoring decisions for these children who may be at risk for learning problems.

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Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences. 2010 Dec;40:2089-100.

**PREDICTABILITY OF OPPOSITIONAL DEFIANT DISORDER AND SYMPTOM DIMENSIONS IN CHILDREN AND ADOLESCENTS WITH ADHD COMBINED TYPE.**

**Aebi M, Müller UC, Asherson P, et al.**

**Background:** Oppositional defiant disorder (ODD) is frequently co-occurring with attention deficit hyperactivity disorder (ADHD) in children and adolescents. Because ODD is a precursor of later conduct disorder (CD) and affective disorders, early diagnostic identification is warranted. Furthermore, the predictability of three recently confirmed ODD dimensions (ODD-irritable, ODD-headstrong and ODD-hurtful) may assist clinical decision making.

**Method:** Receiver-operating characteristic (ROC) analysis was used in order to test the diagnostic accuracy of the Conners' Parent Rating Scale revised (CPRS-R) and the parent version of the Strength and Difficulties Questionnaire (PSDQ) in the prediction of ODD in a transnational sample of 1093 subjects aged 5–17 years from the International Multicentre ADHD Genetics study. In a second step, the prediction of three ODD dimensions by the same parent rating scales was assessed by backward linear regression analyses.

**Results:** ROC analyses showed adequate diagnostic accuracy of the CPRS-R and the PSDQ in predicting ODD in this ADHD sample. Furthermore, the three-dimensional structure of ODD was confirmed by confirmatory factor analysis and the CPRS-R emotional lability scale significantly predicted the ODD irritable dimension.

**Conclusions:** The PSDQ and the CPRS-R are both suitable screening instruments in the identification of ODD. The emotional lability scale of the CPRS-R is an adequate predictor of irritability in youth referred for ADHD.

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J Psychiatr Res. 2010 Dec;44:1214-23.

**REDUCED RIGHT FRONTAL CORTICAL THICKNESS IN CHILDREN, ADOLESCENTS AND ADULTS WITH ADHD AND ITS CORRELATION TO CLINICAL VARIABLES: A CROSS-SECTIONAL STUDY.**

**Almeida LG, Ricardo-Garcell J, Prado H, et al.**

**Objective:** Some longitudinal magnetic resonance imaging (MRI) studies have shown reduced volume or cortical thickness (CT) in the frontal cortices of individuals with attention-deficit/hyperactivity disorder (ADHD). These studies indicated that the aforementioned anatomical abnormalities disappear during adolescence. In contrast, cross-sectional studies on adults with ADHD have shown anatomical abnormalities in the frontal lobe region. It is not known whether the anatomical abnormalities in ADHD are a delay or a deviation in the encephalic maturation. The aim of this study was to compare CT in the frontal lobe of children, adolescents and adults of both genders presenting ADHD with that in corresponding healthy controls and to explore its relationship with the severity of the illness.

**Method:** An MRI scan study was performed on never-medicated ADHD patients. Twenty-one children (6–10 year-olds), twenty adolescents (14–17 year-olds) and twenty adults (25–35 year-olds) were matched with healthy controls according to age and sex. CT measurements were performed using the Freesurfer image analysis suite.

**Results:** The data showed regions in the right superior frontal gyrus where CT was reduced in children, adolescents and adults with ADHD in contrast to their respective healthy controls. The CT of these regions correlated with the severity of the illness.

**Conclusions:** In subjects with ADHD, there is a thinning of the cortical surface in the right frontal lobe, which is present in the children, adolescents and in adults.

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Europ J Spec Needs Educ. 2010;25:397-412.

**EARLY LITERACY AND PARENTAL WRITING MEDIATION IN YOUNG CHILDREN WITH AND WITHOUT ADHD.**

**Aram D, Bazelet I, Goldman H.**

The study compared early literacy of Israeli children aged five to six years with and without attention deficit hyperactivity disorder (ADHD), contrasted parental writing mediation in the two groups and tested the relations between parents' mediation characteristics and children's early literacy skills. Each of 62 parent-child dyads (32 with ADHD) was videotaped at home while writing words. Videotapes were transcribed and analysed for mediation (specific writing task measures, emotional measures typical of problem-solving tasks, and general measures of interactions). Children's early literacy (word writing, letter knowledge and phonological awareness) was assessed at home. Results showed that children with ADHD already exhibited lower literacy achievements at ages five to six compared to their peers without ADHD. Parents of children with ADHD scored lower than parents of children without ADHD on the writing-specific, emotional and general mediation measures. In both groups, the specific writing mediation measures correlated significantly with children's early literacy. More emotional mediation measures correlated significantly with children's early literacy in the ADHD than in the non-ADHD group. Discussion focused on parent-child writing interactions as a context of early literacy development among young children with ADHD.

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Egypt J Neurol , Psychiatr Neurosurg. 2010;47:587-92.

**QUANTITATIVE ELECTROENCEPHALOGRAPHIC CHANGES IN CHILDREN WITH ATTENTION - DEFICIT / HYPERACTIVITY DISORDER.**

**Ashour Y, Abou-Hagar A, Oraby M, et al.**

ADHD has become one of the most commonly diagnosed disorders of childhood, with prevalence rates ranging from 2 to 29%. Objective: To investigate the quantitative electroencephalographic (QEEG) changes that could accompany children with Attention-Deficit/Hyperactivity Disorder (ADHD) in comparison to control children, in order to provide an easy and applicable diagnostic tool when compared to other available functional brain imaging modalities. Methods: A total of 44 children were included (22 ADHD patients and 22 control subjects). All children were between the ages of 6 and 11 years, who attended the Neuropsychiatry outpatient clinic at Suez Canal University Hospital, Ismailia-Egypt. The QEEG was recorded during an eyes-closed resting condition from 19 unipolar electrodes. One minute of artifact-free trace was analyzed using Fourier transformation to obtain both Peak power frequency (PPF) and relative power (RP) estimates of delta, theta, alpha and beta frequency bands. Results: Peak power frequency of Theta band was significantly more frequent and alpha1 band was significantly less frequent among ADHD children in all frontal, fronto-polar, central, parietal, temporal and occipital electrodes ( $P < 0.05$ ), except T3 electrode ( $P > 0.05$ ). Relative power of theta and delta bands were highly significantly higher and alpha1, alpha2 and beta1 bands were highly significantly lower in ADHD children in comparison to control children ( $P < 0.01$ ). Conclusion: Biological background for ADHD is highly suggested by the observed cortical hypoarousal using QEEG. This could be measured by estimating the PPF and RP of theta frequency band.

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Acta Neuropsychol. 2009;7:249-63.

**EVENT-RELATED POTENTIALS IN CHILDREN WITH ATTENTIONDEFICIT/ HYPERACTIVITY DISORDER AND EXCESS BETA ACTIVITY IN THE EEG.**

**Barry RJ, Clarke AR, McCarthy R, et al.**

**Background:** This study investigated whether ERPs from an inter-modal oddball task could distinguish between two groups of children with Attention-Deficit/Hyperactivity Disorder (AD/HD) of the combined type, with and without excess beta in their EEG, and controls.

**Material/Methods:** Three age-matched groups of male children (20 typical AD/HD without excess beta, 20 AD/HD with excess beta, 20 controls) were presented with an inter-modal oddball task in which a counter-phasing checkerboard was the non-target visual sti - mulus (randomly presented on 80% of trials), and a

2000 Hz tone was the auditory target (20% of trials). Stimuli were presented at a fixed rate (stimulus-onset asynchrony 1.03 s) and participants were required to silently count all targets.

**Results:** Compared with controls, the AD/HD group without excess beta showed reduced P2 and P3 to auditory targets, topographic differences in target N1 and N2, and reduced P2 and P3 to visual non-targets, replicating previous AD/HD research. The AD/HD group with excess beta showed a general reversal of these effects in the auditory target N1, P2, N2, and P3, and visual non-target N1, P2 and P3, appearing similar to the control group. However, their visual non-target P1 was more aberrant than that of the other AD/HD group.

**Conclusions:** These results suggest that the children with excess beta do not demonstrate the impaired discrimination and categorization usually noted in children with AD/HD of the combined type. Further research on the cognitive and perceptual functioning of EEG-defined subgroups of AD/HD is warranted.

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Arch Clin Neuropsychol. 2010 Nov;25:671-79.

**RESPONSE INHIBITION AND ACADEMIC ABILITIES IN TYPICALLY DEVELOPING CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER-COMBINED SUBTYPE.**

**Bledsoe JC, Semrud-Clikeman M, Pliszka SR.**

Research in Attention-Deficit/Hyperactivity Disorder (ADHD) generally utilizes clinical samples or children with comorbid psychiatric diagnoses. Findings indicated that children with ADHD experience academic underachievement and poor performance on measures of response inhibition (RI). Less is known, about the neuropsychological profile of typically developing children with ADHD. The aim of the current study was twofold: (1) determine if academic skills and RI were impaired in typically developing children with ADHD-combined subtype (ADHD-C) and (2) determine to what extent RI may predict academic abilities. Children with ADHD-C did not differ on any academic domain from controls. Children with ADHD-C performed more poorly than controls on RI measures. Regression analyses suggest that Written Expression ability was significantly influenced by RI. No other academic domain was related to RI. Results suggest that children with ADHD-C may experience impairments in RI despite adequate academic functioning. Impaired RI is not solely responsible for difficulties found in academic skills in ADHD-C.

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J Exp Child Psychol. 2010 Dec;107:377-93.

**"HUNTING WITH A KNIFE AND ... FORK": EXAMINING CENTRAL COHERENCE IN AUTISM, ATTENTION DEFICIT/HYPERACTIVITY DISORDER, AND TYPICAL DEVELOPMENT WITH A LINGUISTIC TASK.**

**Booth R, Happe F.**

A local processing bias, referred to as "weak central coherence," has been postulated to underlie key aspects of autism spectrum disorder (ASD). Little research has examined whether individual differences in this cognitive style can be found in typical development, independent of intelligence, and how local processing relates to executive control. We present a brief and easy-to-administer test of coherence requiring global sentence completions. We report results from three studies assessing (a) 176 typically developing (TD) 8- to 25-year-olds, (b) individuals with ASD and matched controls, and (c) matched groups with ASD or attention deficit/hyperactivity disorder (ADHD). The results suggest that the Sentence Completion Task can reveal individual differences in cognitive style unrelated to IQ in typical development, that most (but not all) people with ASD show weak coherence on this task, and that performance is not related to inhibitory control. The Sentence Completion Task was found to be a useful test instrument, capable of tapping local processing bias in a range of populations.

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Prog Neuro-Psychopharmacol Biol Psychiatry. 2010;34:1491-94.

**OXIDATIVE IMBALANCE IN CHILD AND ADOLESCENT PATIENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Ceylan M, Sener S, Bayraktar AC, et al.**

Various psychological, social, genetic, and biochemical factors are thought to be involved in the aetiology of attention-deficit/hyperactivity disorder (ADHD). However, few studies have evaluated the biochemical basis of ADHD. In the present study, we evaluate whether levels of nitric oxide pool (NO+NO<sub>2</sub><sup>-</sup>) and malondialdehyde (MDA) oxidants as well as superoxide dismutase (SOD), glutathione peroxidase (GSH-Px), and catalase (CAT) antioxidant enzyme activities are associated with ADHD. The sample population consisted of thirty-five child or adolescent patients diagnosed with ADHD according to DSM-IV-TR criteria. Thirty-five healthy subjects also were included in the study as controls. Venous blood samples were collected, and NO pool and MDA levels as well as SOD, GSH-Px, and CAT activities were measured. NO and MDA levels of the patients were significantly higher than the controls. GSH-Px activities of the patients were significantly lower than the controls. CAT activities of the patients were higher than the controls; however, the difference was not statistically significant. There were no significant differences in SOD activity between the patient and control groups. Remarkably high levels of NO pool and MDA oxidants as well as low GSH-Px activities suggest an oxidative imbalance in paediatric patients with ADHD. CAT activities may be increased in response to increased oxidant levels.

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Dev Neuropsychol. 2010 Nov;35:698-711.

**PREVALENCE OF NEUROLOGICAL SOFT SIGNS AND THEIR NEUROPSYCHOLOGICAL CORRELATES IN TYPICALLY DEVELOPING CHINESE CHILDREN AND CHINESE CHILDREN WITH ADHD.**

**Chan RCK, McAlonan GM, Yang B, et al.**

This study examined prevalence of soft signs in 214 typically developing Chinese children and investigated whether soft signs are associated with attention deficit hyperactivity disorder (ADHD) in this population. Chinese children with ADHD (N = 54) scored significantly higher than age-matched controls on all three soft signs subscales and motor coordination correlated significantly with Stroop interference. Logistic regression supported the utility of the soft sign scales in discriminating children with ADHD and controls. Children with ADHD had a significant excess of soft signs, which may be a useful marker of developmental disruption in this clinical condition.

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J Am Acad Child Adolesc Psychiatry. 2011;50:9-21.

**CHILDHOOD ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND FUTURE SUBSTANCE USE DISORDERS: COMPARATIVE META-ANALYSES.**

**Charach A, Yeung E, Climans T, et al.**

**Objective** In recent years cohort studies have examined childhood attention-deficit/hyperactivity disorder (ADHD) as a risk factor for substance use disorders (SUDs) in adolescence and young adulthood. The long-term risk is estimated for development of alcohol, cannabis, combined alcohol and psychoactive SUDs, combined SUDs (nonalcohol), and nicotine use disorders in children with ADHD.

**Method** MEDLINE, CINAHL, PsycINFO, and EMBASE were searched through October 2009; reference lists of included studies were hand-searched. Prospective cohort studies were included if they compared children with ADHD to children without, identified cases using standardized criteria by mean age of 12 years, followed participants until adolescence (nicotine use) or young adulthood (psychoactive substance use disorder, with and without alcohol, alcohol use disorder, cannabis use disorder), and reported SUD outcomes. Two independent reviewers examined articles and extracted and cross-checked data. Effects were summarized as pooled odds ratios (ORs) in a random effects model.

**Results** Thirteen studies were included. Only two of five meta-analyses, for alcohol use disorder (N = 3,184) and for nicotine use (N = 2,067), estimated ORs showing stability when evaluated by sensitivity analyses. Childhood ADHD was associated with alcohol use disorder by young adulthood (OR = 1.35, 95% confidence interval = 1.11-1.64) and with nicotine use by middle adolescence (OR = 2.36, 95% confidence



interval = 1.71-3.27). The association with drug use disorder, nonalcohol (N = 593), was highly influenced by a single study.

**Conclusions** Childhood ADHD is associated with alcohol and drug use disorders in adulthood and with nicotine use in adolescence.

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Neurosci Behav Physiol. 2010;40:1038-41.

**USE OF ADAPTOL IN THE TREATMENT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER IN CHILDREN.**

**Chutko LS, Surushkina SYu, Nikishena IS, et al.**

The efficacy of Adaptol (a non-benzodiazepine tranquilizer) in the treatment of children with attention deficit hyperactivity disorder (ADHD) was studied. At a dose of 500 mg twice daily for one month, Adaptol decreased hyperactivity and impulsivity without producing significant changes in attention or reaction times (the authors emphasize the importance of this factor, as we are dealing with side effects often encountered when benzodiazepine tranquilizers are used). These results lead to the conclusion that Adaptol can be used in the treatment of ADHD as monotherapy in cases in which there is a predominance of hyperactivity/impulsivity and as a component of complex therapy in other types of the disorder, particularly when ADHD is combined with anxiety disorders.

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Psychiatry Res. 2011;185:225-31.

**CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND AUTISTIC FEATURES: EEG EVIDENCE FOR COMORBID DISORDERS.**

**Clarke AR, Barry RJ, Irving AM, et al.**

Attention-deficit/hyperactivity disorder (AD/HD) is the most common psychiatric disorder of childhood, although AD/HD is rarely the only diagnosis given to these children. Within the literature there is some debate as to whether it is valid to diagnose AD/HD with autism as a comorbid disorder, since the present diagnostic systems exclude the diagnosis of both disorders in the same child. The aim of this study was to determine whether electroencephalography (EEG) differences exist between two groups of children diagnosed with AD/HD, one scoring high (AD/HD+) and one scoring low (AD/HD-) on a measure of autism. The EEG was recorded during an eyes-closed resting condition from 19 electrodes, and Fourier transformed to provide absolute and relative power estimates in delta, theta, alpha and beta bands. Compared to age- and sex-matched controls, the AD/HD- group had increased absolute power in all frequency bands, somewhat higher relative theta activity and decreased relative delta. In comparison to the AD/HD+ group, patients with autistic features (AD/HD+) had a number of qualitative differences in the beta and theta bands. These results indicate the presence of two comorbid conditions in the AD/HD+ group, which suggests that AD/HD and autism can occur in the same individual.

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Brain Res. 2010 Dec;1365:18-34.

**FOCUS ON THE POSITIVE: COMPUTATIONAL SIMULATIONS IMPLICATE ASYMMETRICAL REWARD PREDICTION ERROR SIGNALS IN CHILDHOOD ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Cockburn J, Holroyd CB.**

A number of hypotheses have suggested that the principal neurological dysfunction responsible for the behavioural symptoms associated with Attention-Deficit/Hyperactive Disorder (ADHD) is likely rooted in abnormal phasic signals coded by the firing rate of midbrain dopamine neurons. We present a formal investigation of the impact atypical phasic dopamine signals have on behaviour by applying a TD (?) reinforcement learning model to simulations of operant conditioning tasks that have been argued to quantify the hyperactive, inattentive and impulsive behaviour associated with ADHD. The results presented

here suggest that asymmetrically effective dopamine signals encoded by a punctate increase or decrease in dopamine levels provide the best account for the behaviour of children with ADHD as well as an animal model of ADHD, the spontaneously hypertensive rat (SHR). The biological sources of this asymmetry are considered, as are other computational models of ADHD.

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Child Psychiatry Hum Dev. 2010 Dec;41:641-48.

**BUSPIRONE VERSUS METHYLPHENIDATE IN THE TREATMENT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER: A DOUBLE-BLIND AND RANDOMIZED TRIAL.**

**Davari-Ashtiani R, Shahrabaki ME, Razjouyan K, et al.**

The efficacy and side effects of buspirone compared with methylphenidate (MPH) in the treatment of children with attention-deficit/hyperactivity disorder (ADHD). A total of 34 children with ADHD as defined by DSM-IV-TR were randomized to buspirone or methylphenidate dosed on weight-adjusted basis at buspirone (0.5 mg/kg/day) and methylphenidate (0.3–1 mg/kg/day) for a 6-week double-blind clinical trial. The principle measures of outcome were the teacher and parent ADHD Rating Scale. The side effects were assessed by the special side effect checklist of each drug. In both groups, the scores of teacher and parent ADHD Rating Scale significantly declined on the 6th week as compared to baseline ( $p = 0.001$ ). These effects were observed in the subscales too. No significant differences were observed between the two protocols on the total scores of parent and teacher ADHD Rating Scale, but methylphenidate was superior to buspirone in decreasing the symptoms of inattention. The side effects of buspirone were mild and rare in comparison with MPH. Buspirone has a favorable side-effects profile. It also has clinically and statistically significant impacts on improving the ADHD symptoms in children. These preliminary findings of the efficacy of buspirone in children with ADHD need large and cross-over studies.

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JMS J Med Soc. 2010;24:61-65.

**NEUROPSYCHOLOGICAL DEFICITS AMONG ADHD CHILDREN.**

**Devi WR, Singh SG, Singh LR, et al.**

**Objective:** To evaluate and compare the performance on neuropsychological test of attention & executive function among the ADHD and normal children.

**Materials & Methods:** A total of 30 attention deficit hyperactivity disorder (ADHD) subjects and another 30 matched groups(normal subjects) were selected through convenient sampling method. The NIMHANS Neuropsychological Battery for children was administered individually to find out the broad range of cognitive deficits in both the groups.

**Results:** Deficits in neuropsychological components like sustained attention & focused attention (trial-A) were found to be insignificant at 0.531 and 0.264 at probability level respectively. Deficits in other neuropsychological components such as focused attention (trial-B), verbal fluency, verbal working memory, visuospatial working memory and set shifting were very highly significant at 0.000 probability level whereas planning was found to be highly significant at 0.007 probability level.

**Conclusion:** Neuropsychological deficits in the components like focused attention (trial-B), verbal fluency, verbal working memory, visuospatial working memory and set shifting were found to be very highly significant among ADHD subjects when compared with the normal subjects.

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Psychiatry Res. 2010;180:114-19.

**EEG COHERENCE IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: DIFFERENCES BETWEEN GOOD AND POOR RESPONDERS TO METHYLPHENIDATE.**

**Dupuy FE, Clarke AR, Barry RJ, et al.**

This retrospective study investigated differences in regional derivations of EEG coherence between good and poor responders to methylphenidate (MPH) in children (aged 8-12. years) with the combined type of attention-deficit/hyperactivity disorder (AD/HD). Participants included groups of good and poor male MPH responders and an aged-matched group of male controls. An eyes-closed, resting electroencephalogram (EEG) was recorded from 21 electrode sites. Coherence was calculated from eight intrahemispheric and eight interhemispheric electrode pairs, for the delta, theta, alpha and beta frequency bands. Compared with controls, the AD/HD participants had enhanced laterality over short-medium inter-electrode distances, and elevated frontal interhemispheric coherences, in the theta band. Good MPH responders had higher intrahemispheric coherences than poor MPH responders over short-medium and long inter-electrode distances in the beta band. Enhanced laterality at short-medium inter-electrode distances suggests that the AD/HD children may have a developmental lag in short-axonal connections in the left hemisphere. Elevated frontal interhemispheric theta coherence consistently indicates some frontal dysfunction in AD/HD. The beta coherence differences found between good and poor MPH responders could indicate that good MPH responders have some type of structural dysfunction associated with cortical connections involved in attention/arousal.

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Irish Journal of Psychological Medicine. 2010 Sep;27:148-57.

**IRISH ADOLESCENTS WITH ADHD AND COMORBID SUBSTANCE USE DISORDER.**

**Edokpolo O, Nkire N, Smyth BP.**

**Objectives:** To examine the literature for drug treatment of attention deficit hyperactivity disorder (ADHD) in adolescents with co-occurring substance use disorder (SUD), the challenges posed by this, and make recommendations taking into account current trend in Ireland.

**Methods:** Articles published from 1992-2008 were identified using OVID-MEDLINE search using the search terms attention deficit hyperactivity disorder and substance use disorder. Studies cited include review articles, epidemiological studies, experimental researches, open and controlled trials of drugs in ADHD with comorbid SUD and clinical guidelines. No non-English language papers were included.

**Results:** Thirty-six studies were examined. A number of the papers reported on the link between ADHD and SUD, that they frequently co-occur, and there is evidence that treating ADHD can reduce the risk of future SUD. Some of the studies reviewed demonstrated the safety and effectiveness of ADHD medication on the ADHD symptoms but less so on the SUD. Concerns around stimulant abuse and diversion are valid. Although there is no current evidence of frequent diversion of ADHD medications in Ireland, this practice is prevalent in the US. Consequently psychiatrists should remain vigilant to the possibility of such diversions and take measures to address them if identified.

**Conclusions:** The available evidence suggests that medication is not hazardous in ADHD comorbid with SUD. Pharmacological treatment of ADHD, following consideration of potential risks and benefits, is justified in the presence of SUD. Both methylphenidate and atomoxetine can be used. Stabilisation of serious SUD before pharmacotherapy is preferable, and it is advisable to provide psychological treatment to address SUD in these patients.

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Biol Psychiatry. 2010;68:1084-91.

**ATYPICAL DEFAULT NETWORK CONNECTIVITY IN YOUTH WITH ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER.**

**Fair DA, Posner J, Nagel BJ, et al.**

**Background** Attention-deficit/hyperactivity disorder (ADHD) is a major public health concern. It has been suggested that the brain's default network may provide a crucial avenue for understanding the neurobiology of attention deficit/hyperactivity disorder. Evaluations of the default network have increased over recent years with the applied technique of resting-state functional connectivity magnetic resonance imaging (rs-fcMRI). These investigations have established that spontaneous activity in this network is highly correlated at rest in young adult populations. This coherence seems to be reduced in adults with ADHD. This is an intriguing finding, as coherence in spontaneous activity within the default network strengthens with age. Thus, the pathophysiology of ADHD might include delayed or disrupted maturation of the default network. If so, it is important to determine whether an altered developmental picture can be detected using rs-fcMRI in children with ADHD.

**Methods** This study used the typical developmental context provided previously by Fair et al. (2008) to examine coherence of brain activity within the default network using rs-fcMRI in children with (n = 23) and without attention deficit/hyperactivity disorder (n = 23).

**Results** We found that functional connections previously shown as developmentally dynamic in the default network were atypical in children with attention deficit/hyperactivity disorder consistent with perturbation or failure of the maturational processes.

**Conclusions** These findings are consistent with the hypothesis that atypical consolidation of this network over development plays a role in attention deficit/hyperactivity disorder.

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Journal of Behavioral Education. 2010 Dec;19:257-72.

**A BRIEF EXPERIMENTAL ANALYSIS OF REINFORCER AND RESPONSE DIMENSIONS RELATED TO SELF-CONTROL IN AN OUTPATIENT CLINIC.**

**Falcomata TS, Cooper-Brown LJ, Wacker DP, et al.**

We conducted an assessment of self-control and impulsivity with 9 children referred to an outpatient clinic for impulsive, inattentive, and hyperactive behaviors. Each condition of the assessment consisted of a choice between 2 concurrently presented math or writing tasks, with 1 alternative reflecting impulsive responding and 1 alternative reflecting self-control. For the participants who demonstrated impulsive responding in 1 of 2 baseline conditions, we systematically varied reinforcer quality, delay to reinforcement, and response effort to evaluate the effects of these dimensions on the participants' choices. Results of the assessment revealed that 3 participants displayed self-control responding, and 6 participants displayed impulsive responding during baseline conditions. Of the participants who displayed initial impulsivity, all showed self-control when 1 or more response or reinforcement dimensions were modified to bias responding within a brief multielement design. Results provide a unique application of concurrent schedules for conducting a brief assessment of impulsive responding in an outpatient clinical setting.

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J Abnorm Psychol. 2010;119:699-712.

**CLASSIFICATION OF BEHAVIOR DISORDERS IN ADOLESCENCE: SCALING METHODS, PREDICTIVE VALIDITY, AND GENDER DIFFERENCES.**

**Fergusson DM, Boden JM, Horwood LJ.**

The present study examined issues relating to the measurement and discriminant validity of Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnostic criteria for behavior disorders in adolescence (conduct disorder [CD], oppositional defiant disorder [ODD], attention-deficit/hyperactivity disorder [ADHD]). Data were obtained from a birth cohort of 995 New Zealand-born individuals studied to the age of 25 years and modeled associations between behavior disorder from ages 14 to 16 years and later outcomes including crime, substance use, mental health, parenthood and partnership outcomes, and education and employment outcomes to age 25 years. The associations between behavior disorders and outcomes were

adjusted for both comorbid behavior disorders and a range of confounding factors. The results suggested that (a) dimensional measures of behavior disorder were more strongly correlated with outcomes than categorical (DSM) measures; (b) CD, ODD, and ADHD each had a distinctive pattern of associations with longer term consequences; and (c) there was no evidence to suggest that the developmental consequences of CD, ODD, and ADHD differed by gender. In general, the results supported the validity of DSM diagnostic domains but also highlighted the importance of including in DSM-V methods for both recognizing the severity of disorder and addressing subclinical symptom levels.

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Eur Psychiatry. 2010 Nov;25:402-08.

**DISRUPTIVE SYMPTOMS IN CHILDHOOD AND ADOLESCENCE AND EARLY INITIATION OF TOBACCO AND CANNABIS USE: THE GAZEL YOUTH STUDY.**

**Galéra C, Bouvard MP, Melchior M, et al.**

**Purpose:** To examine the link between symptoms of hyperactivity-inattention and conduct disorder in childhood, and the initiation of tobacco and cannabis use, controlling for other behavioral symptoms, temperament and environmental risk factors.

**Method:** The sample (N = 1107 participants, aged 4 to 18 years at baseline) was recruited from the population-based longitudinal Gazel Youth study with a follow-up assessment 8 years later. Psychopathology, temperament, environmental variables, and initiation of tobacco and cannabis use were self-reported. Event time analyses were performed to assess the effects of childhood disruptive symptoms on age at first use of tobacco and cannabis.

**Results:** Proportional hazard models revealed that participants with high levels of childhood symptoms of both hyperactivity-inattention and conduct disorder were at highest risk of early tobacco initiation (in males: hazard ratio [HR] = 2.05; confidence interval [CI]: 1.24–3.38; in females: HR = 2.01; CI: 1.31– 3.09), and, in males, of early cannabis initiation (HR = 1.95; CI: 1.04–3.64). Temperament, through activity in both males and females and negative emotionality in females, was also associated to early substance use initiation.

**Conclusions:** Children who simultaneously have high levels of symptoms of hyperactivity-inattention and conduct disorder are at increased risk for early substance initiation. These associations may guide childhood health professionals to consider the liability for early substance initiation in high-risk groups.

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Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology. 2010 Nov;38:1097-107.

**DIMENSIONS AND CORRELATES OF ATTENTION DEFICIT/HYPERACTIVITY DISORDER AND SLUGGISH COGNITIVE TEMPO.**

**Garner AA, Marceaux JC, Mrug S, et al.**

The present study examined Sluggish Cognitive Tempo (SCT) in relation to ADHD symptoms, clinical diagnosis, and multiple aspects of adjustment in a clinical sample. Parent and teacher reports were gathered for 322 children and adolescents evaluated for behavioral, emotional, and/or learning problems at a university clinic. Confirmatory factor analyses (CFA) supported the presence of three separate, but correlated factors (SCT, inattention, and hyperactivity/impulsivity) in both parent and teacher ratings. As expected, SCT symptoms were greatest in youth with ADHD Inattentive type, but were also found in non-ADHD clinical groups. SCT symptoms were related to inattention, internalizing, and social problems across both parent and teacher informants; for parent reports, SCT was also related to more externalizing problems. Findings support the statistical validity of the SCT construct, but its clinical utility is still unclear.

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Neuropediatrics. 2010;41:176-81.

**PREDICTORS OF DIFFERENT TYPES OF DEVELOPMENTAL COORDINATION PROBLEMS IN ADHD: THE EFFECT OF AGE, GENDER, ADHD SYMPTOM SEVERITY AND COMORBIDITIES.**

**Ghanizadeh A.**

It is known that developmental coordination problems in children with ADHD are very common. However, it is not clear whether different subtypes of coordination problems are associated with ADHD comorbidities, inattentiveness severity, and impulsivity/hyperactivity severity. A clinical sample of 122 children and adolescents with ADHD and their parents were interviewed. The parents completed the validated and reliable Farsi version of DCD-Q regarding their children. The internal reliability of the DCD-Q was high for the full scale and the subscales. The confirmatory factor analysis indicated that the fit for the hypothesized factor structure of the DCD-Q was poor. Linear regression analysis indicated that the scores of validated DCD-Q in children with ADHD, except for the fine motor/hand writing score, were not predicted by the variables of gender, handedness, age, inattentiveness score, hyperactivity/impulsivity score, and oppositional defiant behavior score. The fit for the hypothesized factor structure of the DCD-Q is poor in children with ADHD. Fine motor/hand writing was predicted by inattention severity. The other subtypes of developmental coordination problems in children with ADHD cannot be attributed to the variables of gender, inattentiveness severity, hyperactivity/impulsivity severity, comorbidity with separation anxiety symptoms and oppositional defiant behavior score, and handedness.

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J Psychopharmacol. 2010;24:1810-18.

**DEPRESSION, ANXIETY AND OBSESSIVE-COMPULSIVE SYMPTOMS AND QUALITY OF LIFE IN CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD) DURING THREE-MONTH METHYLPHENIDATE TREATMENT.**

**Gurkan K, Bilgic A, Turkoglu S, et al.**

The current study was designed to investigate the changes that occur in depression, anxiety, obsessive-compulsive symptoms and health-related quality of life during methylphenidate (MPH) treatment in children with attention-deficit hyperactivity disorder (ADHD). Forty-five treatment naive children with ADHD, aged 8-14, were assessed based on self, parent and teacher reports at the baseline and at the end of the first and third month of MPH treatment regarding changes in inattention, hyperactivity, impulsivity, depression, anxiety and obsessive-compulsive symptoms. Changes in the quality of life were also noted. Repeated measures of analysis of variance (ANOVA) tests with Bonferroni corrections were conducted in order to evaluate the data. Symptoms of inattention, hyperactivity and impulsivity were significantly reduced ( $p < 0.017$ ) following a three-month MPH treatment. There were significant decreases in depression ( $p = 0.004$ ), trait anxiety ( $p = 0.000$ ) and checking compulsion symptom scores ( $p = 0.001$ ). Moreover, parents reported significant improvements in psychosocial ( $p = 0.001$ ) and total scores ( $p = 0.009$ ) of quality of life, despite no change in physical health scores ( $p > 0.05$ ). Children's ratings of quality of life measures showed no significant changes in physical health and psychosocial scores ( $p > 0.05$ ), while total scores significantly improved ( $p = 0.001$ ) after the treatment. Over a three-month MPH treatment, depression, trait anxiety and checking compulsion symptoms decreased and quality of life seemed to improve along with those of inattention, hyperactivity and impulsivity.

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Psychological Science. 2010 Nov;21:1708-15.

**EXPLORING HOW SYMPTOMS OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER ARE RELATED TO READING AND MATHEMATICS PERFORMANCE: GENERAL GENES, GENERAL ENVIRONMENTS.**

**Hart SA, Petrill SA, Willcutt E, et al.**

Children with attention-deficit/hyperactivity disorder (ADHD) tend to perform more poorly on tests of reading and mathematical performance than their typical peers. Quantitative genetic analyses allow for a better understanding of the etiology of ADHD and reading and mathematics outcomes, by examining their common and unique genetic and environmental influences. Analyses were conducted on a sample 271 pairs of 10-year-old monozygotic and dizygotic twins drawn from the Western Reserve Reading and

Mathematics Project. In general, the results suggested that the associations among ADHD symptoms, reading outcomes, and math outcomes were influenced by both general genetic and general shared-environment factors. The analyses also suggested significant independent genetic effects for ADHD symptoms. The results imply that differing etiological factors underlie the relationships among ADHD and reading and mathematics performance. It appears that both genetic and common family or school environments link ADHD with academic performance.

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Australas Psychiatry. 2010;18:556-59.

**Review of attention-deficit/hyperactivity disorder comorbid with oppositional defiant disorder.**

**Hazell P.**

**Objective:** The aim of this paper was to conduct a practitioner review of attention-deficit/hyperactivity disorder (ADHD) co-occurring with oppositional defiant disorder (ODD) encompassing aetiological factors, associated factors, assessment, treatment and prognosis.

**Conclusions:** ADHD and ODD have both shared and unique genetic influences. Persistence of ADHD and ODD in adolescence is linked with an increased risk of delinquent behaviour, substance dependence, anxiety, depression, and possibly bipolar disorder. The diagnostic work up for ADHD must include screening for ODD, which may be achieved through targeted questioning or the use of standard symptom checklists. Treatment requires management of the core symptoms of ADHD plus, in many cases, augmentation with other treatment to address the ODD. Mild cases may respond to behaviour management alone, or monotherapy with stimulant medication or atomoxetine. Moderate to severe cases usually require a combination of pharmacotherapy, which may include clonidine, and behaviour management. Severe or refractory cases may require the introduction of an atypical antipsychotic such as risperidone.

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No To Hattatsu. 2010;42:421-26.

**CLINICAL APPLICATION OF THE MODIFIED STROOP TEST TO CHILDREN WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER.**

**Hirasawa T, Sanada S, Yanagihara M, et al.**

The Stroop test has been already applied to many children with attention deficit/hyperactivity disorder (AD/HD). There are, however, differences in the measurement of the Stroop test, and also in the background conditions of the patients, such as the status of comorbidity with learning disorder (LD), medication and the level of Intelligence Quotient (IQ), and presumably as a result, the outcome of the Stroop test shows a diversity. This study was undertaken to compare the performances of children with AD/HD to normal controls using the modified Stroop test according to the subtypes of AD/HD. Subjects in this study were 23 unmedicated children with AD/HD, ranging from 6 to 14 years of age, and 69 normal controls who were matched on sex and age. Children with AD/HD whose verbal IQ and performance IQ were above 80 showed significant differences in such indices as Incongruent Color Naming time (ICN) and the resulting index of subtracting Color Naming time (CN) from ICN (ICN-CN). As to the analysis according to the subtypes excluding 8 cases with comorbid LD, both the predominantly inattentive type and the group putting together the predominantly hyperactive-impulsive type and the combined type showed significant differences in ICN-CN compared with the normal controls. These results suggest that the inattentiveness relevant factor affects the performance of the interference task in children with AD/HD.

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Hum Brain Mapp. 2010;31:1942-50.

**ENHANCED NEURAL ACTIVITY IN FRONTAL AND CEREBELLAR CIRCUITS AFTER COGNITIVE TRAINING IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Hoekzema E, Carmona S, Tremols V, et al.**

The brain is a plastic entity that can undergo dynamic changes throughout the lifespan as a result of training. Attention-deficit/hyperactivity disorder (ADHD) is commonly treated with psychostimulant medication, and the prevalence of ADHD medication prescription is a topic of heated scientific debate. In addition, cognitive training is frequently provided to patients with ADHD. Although psychostimulant effects have been thoroughly investigated, no previous studies have assessed the neural effects of cognitive training in ADHD. We applied fMRI-paradigms of response inhibition and selective attention to chart the effects of a 10-day cognitive training program in 19 unmedicated ADHD children receiving either cognitive or control training. The two resulting longitudinal datasets were analyzed using whole-brain random-effects general linear models. Although we observed no increases of activity in the control group, both fMRI-datasets revealed enhanced activity after cognitive training in neural structures closely related to ADHD pathophysiology. On the inhibition paradigm, our results indicated increases in orbitofrontal, superior frontal, middle temporal, and inferior frontal cortex. The attentional task was characterized by increased activity in the cerebellum, which correlated with improvement on in-scanner measures of attention. Our findings provide preliminary evidence that cognitive training enhances activity in neural structures typically affected by the disorder. Similar results have been obtained following methylphenidate administration, suggesting that training of cognitive functions may mimic the effects of psychostimulant medication on the brain. These findings postulate a neural account for the potency of cognitive training in ADHD, and hold clinical implications, supporting the inclusion of training programs in standard ADHD-treatment.

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Environ Health Perspect. 2010;118:1762-67.

**EXPOSURE TO POLYFLUOROALKYL CHEMICALS AND ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN U.S. CHILDREN 12-15 YEARS OF AGE.**

**Hoffman K, Webster TF, Weisskopf MG, et al.**

**Background:** Polyfluoroalkyl chemicals (PFCs) have been widely used in consumer products. Exposures in the United States and in world populations are widespread. PFC exposures have been linked to various health impacts, and data in animals suggest that PFCs may be potential developmental neurotoxicants.

**Objectives:** We evaluated the associations between exposures to four PFCs and parental report of diagnosis of attention deficit/hyperactivity disorder (ADHD).

**Methods:** Data were obtained from the National Health and Nutrition Examination Survey (NHANES) 1999-2000 and 2003-2004 for children 12-15 years of age. Parental report of a previous diagnosis by a doctor or health care professional of ADHD in the child was the primary outcome measure. Perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), and perfluorohexane sulfonic acid (PFHxS) levels were measured in serum samples from each child.

**Results:** Parents reported that 48 of 571 children included in the analysis had been diagnosed with ADHD. The adjusted odds ratio (OR) for parentally reported ADHD in association with a 1-( $\mu$ g/L increase in serum PFOS (modeled as a continuous predictor) was 1.03 [95% confidence interval (CI), 1.01-1.05]. Adjusted ORs for 1-( $\mu$ g/L increases in PFOA and PFHxS were also statistically significant (PFOA: OR = 1.12; 95% CI, 1.01-1.23; PFHxS: OR = 1.06; 95% CI, 1.02-1.11), and we observed a nonsignificant positive association with PFNA (OR = 1.32; 95% CI, 0.86-2.02).

**Conclusions:** Our results, using cross-sectional data, are consistent with increased odds of ADHD in children with higher serum PFC levels. Given the extremely prevalent exposure to PFCs, follow-up of these data with cohort studies is needed.

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Schizophr Bull. 2010;36:1167-86.

**OCULOMOTOR AND PUPILLOMETRIC INDICES OF PRO- AND ANTISACCADE PERFORMANCE IN YOUTH-ONSET PSYCHOSIS AND ATTENTION DEFICIT/HYPERACTIVITY DISORDER.**

**Karatekin C, Bingham C, White T.**

The goals of the study were to examine inhibitory deficits on the antisaccade task in 8- to 20-year olds with youthonset psychosis or attention deficit/hyperactivity disorder (ADHD) and healthy controls and to examine if age-related changes in performance differed across groups. In addition to the conventional measures of performance, pupillary dilations were used to obtain estimates of phasic and tonic level of arousal. Results showed that the psychosis, but not the ADHD, group had elevated antisaccade error rates; however, variability of error rates was high in all groups. These inhibitory failures were accompanied by a lower level of momentary cognitive effort (as indexed by pupillary dilations). The largest differences between the control and clinical groups were found not in the expected indices of inhibition but in the probability of correcting inhibitory errors and in variability of antisaccade response times, which were correlated with each other. These findings did not appear to be attributable to a deficit in maintaining task instructions in mind in either disorder or lack of motivation in ADHD. Instead, results point to impairments in both clinical groups in sustaining attention on a trial-by-trial basis, resulting in deficits in self-monitoring. Thus, results show inhibitory deficits in the context of more general attentional impairments in both disorders. (copyright) The Author 2009. Published by Oxford University Press on behalf of the Maryland Psychiatric Research Center. All rights reserved.

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Asian J Psychiatry. 2010;3:173-76.

**SECURITY OF ATTACHMENT IN CHILDREN AND ADOLESCENTS-AN INDIAN EXPERIENCE.**

**Kayastha P, Hirisave U, Natarajan G, et al.**

**Background:** Security of attachment plays a key role in a caregiver's relationship with the child. Though this construct is studied extensively during infancy, early and middle childhood in the west, there are only a few Indian studies available on early childhood. The present article reports three studies which examine security of attachment in middle childhood and adolescence using the Security Scale developed by Kerns et al. (2000).

**Methods:** In all three studies, the data were collected from a cross sectional sample. Normal school going children formed the sample in studies I and II, whereas study III had both a normal and a clinical group of children.

**Results:** Findings from studies I and II indicate secure attachment of children and adolescents with their parents. In study III, the normal group of children showed better security of attachment as compared to the clinical group of children.

**Conclusions:** The authors of the present study highlight the applicability of the security scale in an Indian setting and suggest further research on standardization of the tool and its clinical utility.

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Arch Gen Psychiatry. 2010 Dec;67:1317-23.

**GENOTYPE LINK WITH EXTREME ANTISOCIAL BEHAVIOR: THE CONTRIBUTION OF COGNITIVE PATHWAYS.**

**Langley K, Heron J, O'Donovan MC, et al.**

**CONTEXT:** As genes associated with common disorders are increasingly identified, we need to progress from observing associations to identifying risk pathways. The high-activity COMT genotype, in the presence of attention-deficit/hyperactivity disorder (ADHD), has previously been shown to be associated with extreme antisocial behavior. The same genotype has also been implicated in affecting cognitive function in healthy individuals. Impaired cognitive function might therefore lie on the risk pathway from genotype to clinical outcome.

**OBJECTIVES:** To replicate the association between COMT genotype and antisocial behavior in ADHD and to then test whether (1) impaired executive control or (2) impaired social understanding act as intermediate

phenotypes for this association and lie on the risk pathway between COMT genotype and antisocial behavior.

**DESIGN:** Prospective epidemiological cohort sample.

**SETTING:** The Avon Longitudinal Study of Parents and Children.

**PARTICIPANTS:** Four thousand three hundred sixty-five children with data on COMT Val(1)Met genotype, ADHD symptoms and diagnoses, and measures of social cognition/understanding and executive control.

**MAIN OUTCOME MEASURES:** Antisocial behavior at age 7.5 years assessed using DSM-IV conduct disorder symptoms.

**RESULTS:** We replicated the association of the high-activity COMT genotype, in the presence of ADHD, with extreme antisocial behavior (odds ratio, 2.82; 95% confidence interval, 2.02-3.94;  $P < .001$  for the most severe antisocial behavior). The high-activity COMT genotype was associated with both executive control and impaired social understanding. The strength of the association between genotype and antisocial behavior was unchanged by including executive control in the model but dropped when impaired social understanding was included (odds ratio, 1.87; 95% confidence interval, 1.26-2.76;  $P = .002$ ).

**CONCLUSIONS:** The high-activity COMT genotype in ADHD is associated with antisocial behavior in part via impaired social understanding. Impaired executive control was also associated with the high-activity COMT genotype but may not lie on the risk pathway to antisocial behavior. The findings demonstrate the importance of testing links between genotype, intermediate phenotype, and clinical outcome in the same sample to identify potential risk pathways.

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The American Journal of Psychiatry. 2010 Nov;167:1357-63.

**THE GENETICS OF AUTISM SPECTRUM DISORDERS AND RELATED NEUROPSYCHIATRIC DISORDERS IN CHILDHOOD.**

**Lichtenstein P, Carlström E, Råstam M, et al.**

**Objective:** Autism spectrum disorders are considered to be among the most heritable mental disorders, a notion based on surprisingly sparse data from small clinical studies. Population-based studies of the heritability of other neuropsychiatric disorders and comorbidities among them have also been sparse. The authors sought to address both of these issues.

**Method:** Parents of all Swedish 9- and 12-year-old twin pairs born between 1992 and 2000 ( $N=10,895$ ) were interviewed regarding autism spectrum disorders and associated conditions (response rate, 80%). Concordance rates and structural equation modeling were used for evaluating causes for familial aggregation and overlap between conditions.

**Results:** Monozygotic twins had higher concordance rates than dizygotic twins for autism spectrum disorders, attention deficit hyperactivity disorder (ADHD), developmental coordination disorder, and tic disorder. Genetic effects accounted for 80% (95% CI=29–91) of the variation in liability for autism spectrum disorders, 79% (95% CI=61–88) for ADHD, 70% (95% CI=35–83) for developmental coordination disorder, and 56% (95% CI=37–68) for tic disorder. Among monozygotic co-twins of children with autism spectrum disorders, the probability of having a diagnosis of ADHD was 44%, compared with 15% for dizygotic co-twins. Differences in cross-disorder effects between monozygotic and dizygotic twins were observed for most other comorbidities, and substantial proportions of the genetic variance for autism spectrum disorders was shared with each of the other disorders.

**Conclusions:** Different neuropsychiatric disorders seem to have a common genetic etiology, suggesting caution in the use of diagnostic entities and proband status in efforts to uncover genes predisposing to autism spectrum disorders.

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Environ Health Perspect. 2010;118:1768-74.

**ORGANOPHOSPHATE PESTICIDE EXPOSURE AND ATTENTION IN YOUNG MEXICAN-AMERICAN CHILDREN: THE CHAMACOS STUDY.**

**Marks AR, Harley K, Bradman A, et al.**

**Background:** Exposure to organophosphate (OP) pesticides, well-known neurotoxicants, has been associated with neurobehavioral deficits in children.

**Objectives:** We investigated whether OP exposure, as measured by urinary dialkyl phosphate (DAP) metabolites in pregnant women and their children, was associated with attention-related outcomes among Mexican-American children living in an agricultural region of California.

**Methods:** Children were assessed at ages 3.5 years (n = 331) and 5 years (n = 323). Mothers completed the Child Behavior Checklist (CBCL). We administered the NEPSY-II visual attention subtest to children at 3.5 years and Conners' Kiddie Continuous Performance Test (K-CPT) at 5 years. The K-CPT yielded a standardized attention deficit/hyperactivity disorder (ADHD) Confidence Index score. Psychometricians scored behavior of the 5-year-olds during testing using the Hillside Behavior Rating Scale.

**Results:** Prenatal DAPs (nanomoles per liter) were nonsignificantly associated with maternal report of attention problems and ADHD at age 3.5 years but were significantly related at age 5 years [CBCL attention problems: (beta) = 0.7 points; 95% confidence interval (CI), 0.2-1.2; ADHD: (beta) = 1.3; 95% CI, 0.4-2.1]. Prenatal DAPs were associated with scores on the K-CPT ADHD Confidence Index > 70th percentile [odds ratio (OR) = 5.1; 95% CI, 1.7-15.7] and with a composite ADHD indicator of the various measures (OR = 3.5; 95% CI, 1.1-10.7). Some outcomes exhibited evidence of effect modification by sex, with associations found only among boys. There was also limited evidence of associations between child DAPs and attention.

**Conclusions:** In utero DAPs and, to a lesser extent, postnatal DAPs were associated adversely with attention as assessed by maternal report, psychometrician observation, and direct assessment. These associations were somewhat stronger at 5 years than at 3.5 years and were stronger in boys.

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Psychol Assess. 2010;22:816-26.

**THE STRUCTURE OF CHILDHOOD DISRUPTIVE BEHAVIORS.**

**Martel MM, Gremillion M, Roberts B, et al.**

Attention-deficit/hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) frequently co-occur. Comorbidity of these 2 childhood disruptive behavior domains has not been satisfactorily explained at either a structural or etiological level. The current study evaluated a bifactor model, which allows for a "g" factor in addition to distinct component factors, in relation to other models to improve understanding of the structural relationship between ADHD and ODD. Participants were 548 children (321 boys, 227 girls) between the ages of 6 years and 18 years who participated in a comprehensive diagnostic assessment incorporating parent and teacher ratings of symptoms. Of these 548 children, 153 children were diagnosed with ADHD (without ODD), 114 children were diagnosed with ADHD + ODD, 26 children were diagnosed with ODD (without ADHD), and 239 children were classified as non-ADHD/ODD comparison children (including subthreshold cases). ADHD symptoms were assessed via parent report on a diagnostic interview and via parent and teacher report on the ADHD Rating Scale. ODD symptoms were assessed via teacher report. A bifactor model of disruptive behavior, comprising a "g" factor and the specific factors of ADHD and ODD, exhibited best fit, compared to 1-factor, 2-factor, 3-factor, and 2nd-order factor models of disruptive behaviors. It is concluded that a bifactor model of childhood disruptive behaviors is superior to existing models and may help explain common patterns of comorbidity between ADHD and ODD. (copyright) 2010 American Psychological Association.

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J Am Acad Child Adolesc Psychiatry. 2011;50:46-54.

**FAMILIALITY OF TOURETTE SYNDROME, OBSESSIVE-COMPULSIVE DISORDER, AND ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: HERITABILITY ANALYSIS IN A LARGE SIB-PAIR SAMPLE.**

**Mathews CA, Grados MA.**

**Objective** Tourette syndrome (TS) is a neuropsychiatric disorder with a genetic component that is highly comorbid with obsessive-compulsive disorder (OCD) and attention deficit/hyperactivity disorder (ADHD). However, the genetic relations between these disorders have not been clearly elucidated. This study examined the familial relations among TS, OCD, and ADHD in a large sample of TS families.

**Method** Parent-offspring concordance of TS, OCD, and ADHD was examined in 952 individuals from 222 TS-affected sib-pair families originally collected for genetic studies using logistic regression with generalized estimating equations to control for correlated data. Variance components methods were used to estimate the heritability and genetic and environmental correlations among TS, OCD, and ADHD. Bilineal families where both parents had TS or OCD were excluded.

**Results** OCD and ADHD were highly heritable in these TS families. There were significant genetic correlations between TS and OCD and between OCD and ADHD, but not between TS and ADHD. In addition, significant environmental correlations were found between TS and ADHD and between OCD and ADHD. Parental OCD + ADHD was associated with offspring OCD + ADHD.

**Conclusions** This study provides further evidence for a genetic relation between TS and OCD and suggests that the observed relation between TS and ADHD may due in part be to a genetic association between OCD and ADHD and in part due to shared environmental factors.

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Dev Neurorehabilitation. 2010;13:408-12.

**THE EFFECTS OF INATTENTION/IMPULSIVITY AND ASD SYMPTOM SEVERITY ON SOCIAL SKILLS IN TODDLERS.**

**Matson JL, Worley JA, Neal D, et al.**

**Objective:** The aim of the current study was to examine the effects of symptom severity of ASD and symptom severity of inattention and impulsivity in toddlers to determine the potential impact on social skills.

**Methods:** A total of 240 toddlers diagnosed with ASD, ranging in age from 17-36 months, were included in this study. Parents or legal guardians were administered measures assessing for symptoms of ASD, symptoms of psychopathology and social skills.

**Results:** A significant interaction was found, indicating that toddlers with less severe symptoms of ASD and of inattention/impulsivity had better social skills. In contrast, toddlers with more severe symptoms of ASD and inattention/impulsivity had the most deficits in social skills.

**Conclusion:** These results further confirm that a multidimensional approach to assessment is needed and that comorbid psychopathology symptoms and social skills targets should be a focus of assessment and intervention.

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Indian Journal of Community Psychology. 2010 Sep;6:227-37.

**A COMPARATIVE STUDY OF NORMAL AND ATTENTION DEFICIT HYPERACTIVE DISORDER CHILDREN.**

**Moorjani J, Tanwar P, Shrimali S.**

The present study was carried out to compare the Attention deficit Hyperactive Children on Child Behaviour Check List and Parent Symptom Questionnaire and Normal Children. A sample of 80 school going children both boys and girls in which 40 normal and 40 ADHD, age range of 6 to 10 years and 11 to 14 years was taken for present study. Two group design was used. The group of ADHD children were experimental whereas control group was of normal children. Means, SD, t test and z test were computed. Results revealed a considerable consequences to psychological characteristics of the ADHD children. Findings showed that Normal and ADHD children were significantly different in Parent Symptom Questionnaire and Child Behaviour Check List.

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Biol Psychiatry. 2010;68:1114-19.

**BASIC IMPAIRMENTS IN REGULATING THE SPEED-ACCURACY TRADEOFF PREDICT SYMPTOMS OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Mulder MJ, Bos D, Weusten JMH, et al.**

**Background** Attention-deficit/hyperactivity disorder (ADHD) is characterized by poor optimization of behavior in the face of changing demands. Theoretical accounts of ADHD have often focused on higher-order cognitive processes and typically assume that basic processes are unaffected. It is an open question whether this is indeed the case.

**Method** We explored basic cognitive processing in 25 subjects with ADHD and 30 typically developing children and adolescents with a perceptual decision-making paradigm. We investigated whether individuals with ADHD were able to balance the speed and accuracy of decisions.

**Results** We found impairments in the optimization of the speed-accuracy tradeoff. Furthermore, these impairments were directly related to the hyperactive and impulsive symptoms that characterize the ADHD-phenotype.

**Conclusions** These data suggest that impairments in basic cognitive processing are central to the disorder. This calls into question conceptualizations of ADHD as a "higher-order" deficit, as such simple decision processes are at the core of almost every paradigm used in ADHD research.

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Gen Hosp Psychiatry. 2010;32:612-14.

**COLLABORATIVE CARE FOR THE TREATMENT OF HISPANIC CHILDREN DIAGNOSED WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**Myers K, Stoep AV, Thompson K, et al.**

**Objective:** This study examined the use of the collaborative care model in treating Hispanic children diagnosed with attention-deficit hyperactivity disorder (ADHD) living in underserved communities.

**Methods:** The study was implemented in two clinics, one in a rural and one in an urban setting. We evaluated model implementation and used standardized rating scales to assess pre/post-intervention changes in ADHD symptoms. All children were referred and treated by their pediatricians. A care manager conveyed medication recommendations from a child and adolescent psychiatrist to the pediatrician who in turn implemented recommendations. The care manager also provided psychoeducation regarding the causes and management of ADHD.

**Results:** The model was successfully implemented. Differences were observed across the two clinics. The urban clinic provided more sessions in the first 2 months of treatment, collected more rating scales, provided more psychoeducation, made more medication adjustments, and prescribed higher medication doses. However, children at both sites showed comparable reductions in ADHD symptoms. Parents were satisfied with the collaborative care model. Staff expressed the need for more administrative support in implementing the model.

**Conclusions:** Collaborative care appears feasible and acceptable for the treatment of Hispanic children with ADHD and shows preliminary evidence of effectiveness.

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Journal of Child Psychology and Psychiatry. 2010 Nov;51:1242-50.

**PERINATAL RISK FACTORS INTERACTING WITH CATECHOL O-METHYLTRANSFERASE AND THE SEROTONIN TRANSPORTER GENE PREDICT ASD SYMPTOMS IN CHILDREN WITH ADHD.**

**Nijmeijer JS, Hartman CA, Rommelse NNJ, et al.**

**Background:** Symptoms of autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) often co-occur. Given the previously found familiarity of ASD symptoms in children with ADHD, addressing these symptoms may be useful for genetic association studies, especially for candidate gene findings that have not been consistently replicated for ADHD.

**Methods:** We studied the association of the catechol O-methyltransferase (COMT) Val158Met polymorphism and the serotonin transporter (SLC6A4/SERT/5-HTT) 5-HTTLPR insertion/deletion

polymorphism with ASD symptoms in children with ADHD, and whether these polymorphisms would interact with pre- and perinatal risk factors, i.e., maternal smoking during pregnancy and low birth weight. Analyses were performed using linear regression in 207 Dutch participants with combined type ADHD of the International Multicenter ADHD Genetics (IMAGE) study, and repeated in an independent ADHD sample (n = 439) selected from the TRacking Adolescents' Individual Lives Survey (TRAILS). Dependent variables were the total and subscale scores of the Children's Social Behavior Questionnaire (CSBQ).

**Results:** No significant main effects of COMT Val158Met, 5-HTTLPR, maternal smoking during pregnancy and low birth weight on ASD symptoms were found. However, the COMT Val/Val genotype interacted with maternal smoking during pregnancy in increasing stereotyped behavior in the IMAGE sample ( $p = .008$ ); this interaction reached significance in the TRAILS sample after correction for confounders ( $p = .02$ ). In the IMAGE sample, the 5-HTTLPR S/S genotype interacted with maternal smoking during pregnancy, increasing problems in social interaction ( $p = .02$ ), and also interacted with low birth weight, increasing rigid behavior ( $p = .03$ ). Findings for 5-HTTLPR in the TRAILS sample were similar, albeit for related CSBQ subscales.

**Conclusions:** These findings suggest gene–environment interaction effects on ASD symptoms in children with ADHD.

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Arch Clin Neuropsychol. 2010 Nov;25:656-70.

**NEUROPSYCHOLOGICAL PROFILE OF EXECUTIVE FUNCTION IN GIRLS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

**O'Brien JW, Dowell LR, Mostofsky SH, et al.**

The majority of research on neurobehavioral functioning among children with Attention-Deficit/Hyperactivity Disorder (ADHD) is based on samples comprised primarily (or exclusively) of boys. Although functional impairment is well established, available research has yet to specify a neuropsychological profile distinct to girls with ADHD. The purpose of this study was to examine performance within four components of executive function (EF) in contemporaneously recruited samples of girls and boys with ADHD. Fifty-six children with ADHD (26 girls) and 90 controls (42 girls), ages 8–13, were administered neuropsychological tests emphasizing response inhibition, response preparation, working memory, and planning/shifting. There were no significant differences in age or SES between boys or girls with ADHD or their sex-matched controls; ADHD subtype distribution did not differ by sex. Compared with controls, children with ADHD showed significant deficits on all four EF components. Girls and boys with ADHD showed similar patterns of deficit on tasks involving response preparation and working memory; however, they manifested different patterns of executive dysfunction on tasks related to response inhibition and planning. Girls with ADHD showed elevated motor overflow, while boys with ADHD showed greater impairment during conscious, effortful response inhibition. Girls, but not boys with ADHD, showed impairment in planning. There were no differences between ADHD subtypes on any EF component. These findings highlight the importance of studying boys and girls separately (as well as together) when considering manifestations of executive dysfunction in ADHD.

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Trastor Adict. 2010;12:79-86.

**ATTENTION DEFICIT AND HYPERACTIVITY DISORDER (ADHD) AND SUBSTANCE USE: PRELIMINARY OUTCOMES OF A FOLLOW-UP IN A YOUNG POPULATION.**

**Ochoa-Mangado E, Madoz-Gurpide A, Villaceros-Durban I, et al.**

**Introduction:** The relationship between substance use and attention deficit and hyperactivity disorder (ADHD) is considered increasingly important among adolescents and youth.

**Objetives:** The aim of this study is to assess ADHD in adolescent and young people treated in the Program for Adolescents and Families by "Proyecto Hombre" organization (Madrid, Spain).

**Material and methods:** We have included 223 adolescent and young people (75 % male) treated in the Program for Adolescents and Families from 2006 to April 2009. The psychiatric evaluation is conducted of



adolescents with psychiatric history, treatment with psychotropic drugs or psychiatric symptoms suggesting.

**Results:** Of the total sample, 15 adolescents (all boys) were diagnosed with ADHD comorbid disorder (6.72 % of all the sample). These adolescents consumed mainly cannabis, and less alcohol and/or cocaine. The diagnosis of ADHD was held prior to substance use in 13 of them; 11 had received any specific drug treatment (only three at the time of evaluation; four had left voluntarily, and in four cases the treatment had been retired). During therapeutic programme, 14 of them receive specific drug treatment for ADHD.

**Conclusions:** Patients with ADHD and substance misuse are more serious, with more important behavioural alterations, and with special difficulties in the treatment. This way, it is important to take special care and to improve the adherence, especially during the first months in the therapeutic program. In addition it's necessary to treat adequately the ADHD.

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J Am Acad Child Adolesc Psychiatry. 2010;49:1183-85.

**EVALUATING THE QUALITY OF COMMUNITY CARE FOR ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER.**

**Olfson M.**

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European Journal of Education and Psychology. 2010 Dec;3:219-28.

**CÓMO INTERFIERE LA ANSIEDAD, LA PROBABILIDAD DE ACTUACIÓN Y LA DEFENSA DE LOS PROPIOS DERECHOS EN ALUMNOS CON DIFICULTADES DE APRENDIZAJE EN SU RENDIMIENTO?**

**Pacheco DI, del Carmen Díez M, García JN.**

To correct social setting, peers are key actors, both as a socio-psycho-emotional and behavioral students since figures is similar perspectives and promote the acquisition of social skills, friendships, adapting to new social roles etc. Anxiety, likelihood of action and defense of the rights themselves interfere with students with learning disabilities because they lack social skills not only to perceive and understand the logical relationships, but also to prevent and choose the appropriate behavior in social situations. Therefore, the purpose of this communication is to analyze the different variables of social skills in students with learning disabilities. The sample for carrying out the study corresponds to 193 students from 4th to 6th year of primary education of different type (children with and without learning disabilities and students with attention deficit hyperactivity disorder (ADHD)). The results obtained show an emotional disadvantage in relation to LD and ADHD students compared to students without learning disabilities.

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Journal of Abnormal Child Psychology: An official publication of the International Society for Research in Child and Adolescent Psychopathology. 2010 Nov;38:1083-95.

**THE GENETIC ASSOCIATION BETWEEN ADHD SYMPTOMS AND READING DIFFICULTIES: THE ROLE OF INATTENTIVENESS AND IQ.**

**Paloyelis Y, Rijdsdijk F, Wood AC, et al.**

Previous studies have documented the primarily genetic aetiology for the stronger phenotypic covariance between reading disability and ADHD inattention symptoms, compared to hyperactivity-impulsivity symptoms. In this study, we examined to what extent this covariation could be attributed to “generalist genes” shared with general cognitive ability or to “specialist” genes which may specifically underlie processes linking inattention symptoms and reading difficulties. We used multivariate structural equation modeling on IQ, parent and teacher ADHD ratings and parent ratings on reading difficulties from a general population sample of 1312 twins aged 7.9–10.9 years. The covariance between reading difficulties and ADHD inattention symptoms was largely driven by genetic (45%) and child-specific environment (21%) factors not shared with IQ and hyperactivity-impulsivity; only 11% of the covariance was due to genetic

effects common with IQ. Aetiological influences shared among all phenotypes explained 47% of the variance in reading difficulties. The current study, using a general population sample, extends previous findings by showing, first, that the shared genetic variability between reading difficulties and ADHD inattention symptoms is largely independent from genes contributing to general cognitive ability and, second, that child-specific environment factors, independent from IQ, also contribute to the covariation between reading difficulties and inattention symptoms.

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School Psychology Quarterly. 2010 Dec;25:236-48.

**EXTENDED TIME ON ACADEMIC ASSIGNMENTS: DOES INCREASED TIME LEAD TO IMPROVED PERFORMANCE FOR CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER?**

**Pariseau ME, Fabiano GA, Massetti GM, et al.**

Researchers examined the impact of an extended time accommodation on appropriate classroom behavior and rate of work completion for 33 children with attention-deficit/hyperactivity disorder (ADHD). Participants received standard (30 min) or extended (45 min) time to complete seatwork in a within-subject, crossover design study. Appropriate behavior (i.e., rule-following behavior) and rate of problems completed accurately per minute were compared across conditions. Children completed significantly more problems correctly per minute when given standard time compared with extended time; however, no difference in appropriate behavior was found between the two conditions. Appropriate behavior over time was examined by segmenting each condition into time intervals. Analyses indicated that children's appropriate behavior significantly decreased over time in both conditions. The implications of these findings are discussed.

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Psicothema. 2010 Nov;22:778-83.

**SEGUIMIENTO DE LOS EFECTOS DE UNA INTERVENCIÓN PSICOSOCIAL SOBRE LA ADAPTACIÓN ACADÉMICA, EMOCIONAL Y SOCIAL DE NIÑOS CON TDAH.**

**Presentación Herrero MJ, Hierro RS, Jiménez PJ, et al.**

The aim of this investigation was to analyze the maintenance of the effects, one year after its conclusion, of an intervention that integrated three coordinated programs, implemented with 27 children with ADHD, aged between 7 and 10 years, their parents and teachers. The intervention lasted 10 weeks and included behavior-modification and cognitive-behavioral techniques, academic adaptations and social skills. We evaluated the effects on academic, emotional and social adjustment from the information provided by parents, teachers and classmates. The results confirm the maintenance in the follow-up evaluation of the improvements experienced after the treatment, especially in the academic and social areas, in which these children displayed the greatest difficulties.

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European Journal of Psychology of Education. 2010 Sep;25:315-23.

**ADHD EXPRESSIVE WRITING DIFFICULTIES OF ADHD CHILDREN: WHEN GOOD DECLARATIVE KNOWLEDGE IS NOT SUFFICIENT.**

**Re AM, Cornoldi C.**

A large body of evidence shows that many of the academic difficulties Attention Deficit Hyperactivity Disorder (ADHD) children have may be related to their problems in executive control. However, the particular case of expressive writing has not been deeply explored. The present study examines the typical school exercise of writing a letter. Participants were 33 third, fourth, and fifth graders referred by teachers for the presence of ADHD symptoms plus 33 controls. The task consisted of describing an aspect of their life in the form of a letter. Texts of ADHD children were poorer than those of the controls for structure, vocabulary, grammar, length, and accuracy. Furthermore, the difference persisted even when a guide was

used to support the writing task. However, the two groups were not significantly different in a metacognitive test measuring knowledge on critical factors affecting expressive writing. Results show that ADHD children may encounter severe difficulties in expressive writing that are not due to differences in knowledge about how to write. Educational implications are discussed.

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Acta Paediatr Int J Paediatr. 2010;99:1894-96.

**ADHD AND EPILEPSY IN CHILDREN WITH TOURETTE SYNDROME: A TRIPLE COMORBIDITY?**

**Rizzo R, Gulisano M, Cali PV, et al.**

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Clin Pediatr. 2011;50:37-43.

**PEDIATRICIAN-PSYCHIATRIST COLLABORATION TO CARE FOR CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER, DEPRESSION, AND ANXIETY.**

**Ross WJ, Chan E, Harris SK, et al.**

**Objective:** To describe pediatrician experiences collaborating with psychiatrists when caring for children with attention deficit hyperactivity disorder (ADHD), depression, and anxiety.

**Method:** A random sample of Massachusetts primary care pediatricians completed a mailed self-report survey.

**Results:** Response rate was 50% (100/198). Most pediatricians preferred psychiatrists to initiate medications for anxiety (87%) or depression (85%), but not ADHD (22%). Only 14% of respondents usually received information about a psychiatry consultation. For most (88%), the family was the primary conduit of information from psychiatrists, although few (14%) believed the family to be a dependable informant. Despite this lack of direct communication, most pediatricians reported refilling psychiatry-initiated prescriptions for ADHD (88%), depression (76%), and anxiety (72%).

**Conclusions:** Pediatricians preferred closer collaboration with psychiatrists for managing children with anxiety and depression, but not ADHD. The communication gap between psychiatrists and pediatricians raises concerns about quality of care for children with psychiatric conditions.

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Hum Brain Mapp. 2010;31:1823-33.

**DISORDER-SPECIFIC INFERIOR PREFRONTAL HYPOFUNCTION IN BOYS WITH PURE ATTENTION-DEFICIT/HYPERACTIVITY DISORDER COMPARED TO BOYS WITH PURE CONDUCT DISORDER DURING COGNITIVE FLEXIBILITY.**

**Rubia K, Halari R, Cubillo A, et al.**

**Background.** Problems with cognitive flexibility have been observed in patients with attention deficit hyperactivity disorder (ADHD) and in patients with conduct disorder (CD), characterized by the violation of societal rules and the rights of others. Functional magnetic resonance imaging (fMRI) of cognitive switching, however, has only been investigated in patients with ADHD, including comorbidity with CD, finding frontostriatal and temporoparietal underactivation. This study investigates disorder-specific functional abnormalities during cognitive flexibility between medication-naive children and adolescents with noncomorbid CD and those with noncomorbid ADHD compared to healthy controls.

**Methods.** Event-related fMRI was used to compare brain activation of 14 boys with noncomorbid, childhood-onset CD, 14 boys with noncomorbid ADHD, and 20 healthy comparison boys during a visual-spatial Switch task.

**Results.** Behaviorally, children with ADHD compared to children with CD had significantly slower reaction times to switch compared to repeat trials. The fMRI comparison showed that the patients with ADHD compared to both controls and patients with CD showed underactivation in right and left inferior prefrontal

cortex. No disorder-specific brain underactivation was observed in patients with CD. Only when compared with controls alone, the disruptive behavior group showed reduced activation in bilateral temporoparietal and occipital brain regions.

**Conclusions.** The findings extend previous evidence for disorder-specific underactivation in patients with ADHD compared to patients with CD in inferior prefrontal cortex during tasks of inhibitory control to the domain of cognitive flexibility. Inferior prefrontal underactivation thus appears to be a disorder-specific neurofunctional biomarker for ADHD when compared with patients with CD. *Hum Brain Mapp*, 2010.

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*Rev Neurol*. 2010;51:337-46.

**ATTENTION DEFICIT HYPERACTIVITY DISORDER IN TEENAGERS: APPRAISAL OF THE EDAH (A) SCALE.**

**Sanchez CR, Díaz F, Ramos C.**

**Aims.** To appraise the attention deficit hyperactivity disorder assessment scale for a teenage population, EDAH (a).

**Subjects and methods.** From an initial sample of 3400 participants, a final sample of 2292 pupils between 12 and 16 years of age were finally selected. Of the total number, 1066 were boys (46.5%) and 1226 were girls (53.5%).

**Results and conclusions.** On obtaining significant differences both for age and for sex on the subscales that make up the aforementioned test, assessments were performed taking these variables into account. The cut-off points for each of the subscales are presented and in all cases they were above the 90th percentile.

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*Arch Clin Neuropsychol*. 2010 Dec;25:771-80.

**THE ROLE OF INATTENTION AND SOCIAL PERCEPTION AND PERFORMANCE IN TWO SUBTYPES OF ADHD.**

**Semrud-Clikeman M.**

This study evaluated the social perception and social functioning of children with Attention Deficit Hyperactivity Disorder-Combined (ADHD-C), ADHD-predominately inattentive (ADHD-PI), and controls. Two-hundred and seventy children with ADHD-C, ADHD-PI, or controls were evaluated using direct and indirect measures of social functioning. The ADHD-C and ADHD-PI groups showed significant differences in interpretation of emotional and nonverbal cues on a direct measure of social perception compared with controls. The number of inattentive symptoms was significantly related to poor performance for interpretation of both emotional and nonverbal cues, whereas hyperactivity and impulsivity symptoms showed a less robust relation. Children with ADHD-C were rated by parents and teachers as showing significant problems with social performance and problem behaviors compared with those with ADHD-PI or with controls. These findings show a link between inattention and social perception that is separate from impulsivity difficulties. These findings have important implications for treatment.

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*Epilepsy Behav*. 2010;19:428-35.

**PARENTS REPORT MORE ADHD SYMPTOMS THAN DO TEACHERS IN CHILDREN WITH EPILEPSY.**

**Sherman EMS, Brooks BL, Akdag S, et al.**

Children with epilepsy have a high rate of attention deficit/hyperactivity disorder (ADHD), yet parent-teacher agreement on ADHD symptoms in epilepsy is unknown despite the need to assess symptoms across settings such as home and school. Parent-teacher agreement on ADHD ratings was investigated in 208 children with epilepsy (mean age. = 11.2, SD. = 3.6) using the ADHD Rating Scale IV, along with associations with demographic variables, epilepsy severity, adaptive level, and quality of life. Children were

four times more likely to be identified as having clinically elevated ADHD symptoms when parent ratings were the benchmark versus teachers. Agreement was highest for children with more severe ADHD symptoms, for the Hyperactivity-Impulsivity dimension of behavior, and for children with broadly normal adaptive behavior. Higher parent and teacher ADHD ratings were related to reduced quality of life, but unrelated to epilepsy severity. Exclusive reliance on parent or teacher ratings may yield variable rates of ADHD symptoms in children with epilepsy.

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Res Dev Disabil. 2011;32:30-36.

**ASSISTING PEOPLE WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER BY ACTIVELY REDUCING LIMB HYPERACTIVE BEHAVIOR WITH A GYRATION AIR MOUSE THROUGH A CONTROLLED ENVIRONMENTAL STIMULATION.**

**Shih CH.**

The latest researches have adopted software technology turning the gyration air mouse into a high performance limb movement detector, and have assessed whether two persons with multiple disabilities would be able to control an environmental stimulation using limb movement. This study extends gyration air mouse functionality by actively reducing limb hyperactive behavior to assess whether two persons with attention deficit hyperactivity disorder (ADHD) would be able to actively reduce their limb hyperactive behavior by controlling their favorite stimulation on/off using a gyration air mouse with a newly developed actively limb hyperactive behavior reducing program (ALHBRP). The study was performed according to an ABAB design, in which A represented the baseline and B represented intervention phases. Data showed that both participants significantly increased their time duration of maintaining a static limb posture (TDMSLP) to activate the control system in order to produce environmental stimulation during the intervention phases. Practical and developmental implications of the findings are discussed.

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J Psychopathol Behav Assess. 2010 Dec;32:557-64.

**CONSTRUCT VALIDITY OF ADHD-IN, ADHD-HI, ODD TOWARD ADULTS, ACADEMIC AND SOCIAL COMPETENCE DIMENSIONS WITH TEACHER RATINGS OF THAI ADOLESCENTS: ADDITIONAL VALIDITY FOR THE CHILD AND ADOLESCENT DISRUPTIVE BEHAVIOR INVENTORY.**

**Shipp F, Burns GL, Desmul C.**

Confirmatory factor analysis was used to test the construct validity of an attention-deficit/hyperactivity disorder-inattention, attention-deficit/hyperactivity disorder-hyperactivity/impulsivity, oppositional defiant disorder toward adults, academic and social competence factor model with teacher ratings of Thai adolescents (n = 872) with the Child and Adolescent Disruptive Behavior Inventory. The five-factor model resulted in an adequate fit in an absolute sense (i.e., CFI = .960; TLI = .985; RMSEA = .065; and WRMR = .883). All the items had significant and substantial loadings on their respective factors (i.e., > .78) with the five-factors showing discriminant validity. The five-factor model also resulted in similar results for boys and girls separately as well as younger and older adolescents. The current findings with the teacher version of the measure in conjunction with earlier research with mothers' and fathers' ratings of Brazilian, Thai, and American children (Burns et al., Psychological Assessment, 20, 121-130, 2008) and Thai adolescents (Burns et al., Psychological Assessment, 21, 635-641, 2009) provide increasing support for the construct validity of Child and Adolescent Disruptive Behavior Inventory within multiple cultures. Procedures are also outlined to improve the content validity as well as test the construct validity of forthcoming parent and teacher DSM-V ADHD/ODD rating scales.

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Epilepsy Behav. 2010;19:483-86.

**EPILEPTIFORM ABNORMALITIES IN CHILDREN DIAGNOSED WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER.**

**Socanski D, Herigstad A, Thomsen PH, et al.**

The frequency of epileptiform abnormalities (EAs) and correlates of EAs in children with attention deficit/hyperactivity disorder (ADHD) was investigated in a retrospective study. The total sample consisted of 607 children with ADHD from the only center diagnosing and treating ADHD in the region. EEGs were obtained in 517 cases, and EAs were found in 39 (7.5%) children. Of these, 21(53.9%) showed generalized EAs, 16 (41%) had focal EAs, and 2 (5.1%) had both. Rolandic spikes were observed in 9 cases (1.7% of the total group). A previous history of epileptic seizures was reported in 14 (2.5%) children, and was more common in those with EAs than in those without. The group with ADHD and EAs had a larger proportion of girls and the ADHD inattentive subtype, independent of a history of epilepsy. Future research should focus on the clinical consequences of EAs in children with ADHD.

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Biol Psychiatry. 2010 Dec;68:1120-25.

**THE SNAP25 GENE IS LINKED TO WORKING MEMORY CAPACITY AND MATURATION OF THE POSTERIOR CINGULATE CORTEX DURING CHILDHOOD.**

**Söderqvist S, McNab F, Peyrard-Janvid M, et al.**

**Background:** Working memory (WM) is the ability to retain task relevant information. This ability is important for a wide range of cognitive tasks, and WM deficits are a central cognitive impairment in neurodevelopment disorders such as attention-deficit/hyperactivity disorder (ADHD). Although WM capacity is known to be highly heritable, most genes involved remain unidentified.

**Methods:** Single nucleotide polymorphisms in genes previously associated with cognitive functions or ADHD were selected for genotyping. Associations of these with WM tasks were investigated in a community sample of 330 children and young adults. One single nucleotide polymorphisms was also investigated in an independent sample of 88 4-year-old children. Furthermore, association between brain structure and activity, as measured by magnetic resonance imaging techniques, and single nucleotide polymorphisms alleles were estimated in 88 participants.

**Results:** Genotype at rs363039, located in the gene coding for synaptosomal-associated protein, 25 kDa (SNAP25) was associated to WM capacity in both samples. Associations in the community sample were also found with measures of other cognitive functions. In addition, this polymorphism affected the gray matter and brain activity in the posterior cingulate cortex, an area included in the so-called default mode network previously correlated to regulation of attention and hypothesized to be implicated in ADHD.

**Conclusions:** A novel gene–brain–behavior network was identified in which a genotype located in SNAP25 affects WM and has age-dependent effects on both brain structure and brain activity. Identifying such networks could be a key to better understanding cognitive development as well as some of its disorders.

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Child & Family Behavior Therapy. 2010 Oct;32:272-90.

**MEASURING PARENTAL TREATMENT ADHERENCE IN A MULTIMODAL TREATMENT PROGRAM FOR CHILDREN WITH ADHD: A PRELIMINARY INVESTIGATION.**

**Springer C, Reddy LA.**

This study evaluated the clinical significance of measuring between session parental adherence on child and parent outcomes for 51 children (age 4 to 8.5 years) with attention deficit/hyperactivity disorder (ADHD) in a multimodal group training program. Three group treatment conditions: (a) child-only treatment (C1), (c) child and parent training (C2), and (c) C2 + Parent Adherence Measure [PAM (C3)] were compared to assess the clinical significance of measuring parental adherence on child behavioral problems, socialization skills, and parental efficacy. Parents administered the PAM (C3) displayed, in general, better outcomes on child and parent measures than the other two conditions. Results suggest that a multimodal group training program for young children with ADHD is favorable to child group training only.



This study offers preliminary support for the clinical utility of measuring parental adherence in a child ADHD multimodal group training program.

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Synapse. 2011;65:154-59.

**MOLECULAR IMAGING GENETICS OF METHYLPHENIDATE RESPONSE IN ADHD AND SUBSTANCE USE COMORBIDITY.**

**Szobot CM, Roman T, Hutz MH, et al.**

**Purpose:** Attention-deficit/hyperactivity disorder (ADHD) and substance use disorders (SUDs) are highly comorbid and may share a genetic vulnerability. Methylphenidate (MPH), a dopamine transporter (DAT) blocker, is an effective drug for most ADHD patients. Although dopamine D4 receptor (DRD4) and dopamine transporter (DAT1) genes have a role in both disorders, little is known about how these genes influence brain response to MPH in individuals with ADHD/SUDs. The goal of this study was to evaluate whether ADHD risk alleles at DRD4 and DAT1 genes could predict the change in striatal DAT occupancy after treatment with MPH in adolescents with ADHD/SUDs.

**Methods:** Seventeen adolescents with ADHD/SUDs underwent a SPECT scan with [Tc99m]TRODAT-1 at baseline and after three weeks on MPH. Caudate and putamen DAT binding potential was calculated. Comparisons on DAT changes were made according to the subjects' genotype.

**Results:** The combination of both DRD4 7-repeat allele (7R) and homozygosity for the DAT1 10-repeat allele (10/10) was significantly associated with a reduced DAT change after MPH treatment in right and left caudate and putamen, even adjusting the results for potential confounders (P (less-than or equal to) 0.02; R2 from 0.50 to 0.56).

**Conclusions:** In patients with ADHD/SUDs, combined DRD4 7R and DAT1 10/10 could index MPH reduced DAT occupancy. This might be important for clinical trials, in terms of better understanding individual variability in treatment response. Synapse 2011.

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Nöropsikiyatri Arsivi/Archives of Neuropsychiatry. 2010 Sep;47:241-46.

**PSIKİYATRİK BOZUKLUGU OLAN VE OLMAYAN ERGENLERDE PROBLEMLİ İNTERNET KULLANIMI.**

**Tahiroglu AY, Çelik GG, Fettahoglu Ç, et al.**

**Objective:** The aim of this study is to determine the characteristics of internet use and Problematic Internet Use (PIU) in adolescents with and without psychiatric disorder.

**Methods:** The present study was performed on 884 adolescents, who were in the age group of 12 to 18 years. Each o psychiatric sample (PS) and community sample (CS) included 442 age/gender matched adolescents. PS were patients at the child and adolescent psychiatry departments of Cukurova, Mersin and Akdeniz Universities. Online Cognition Scale (OCS) was used for PIU.

**Results:** The most common diagnoses in PS were attention deficit hyperactivity disorder (ADHD; n: 260), followed by anxiety disorders (AD; n: 96), mood disorders (MD; n: 55), and other disorders (OD; n: 31,7.0%). 23.3% of participants in PS and 10.6% in CS reported use of internet for more than 8 hours/week (p = 0.0001). Additionally, mean OCS scores of participants in PS were significantly higher than those in CS (p = 0.0001). The highest OCS score average was observed in the ADHD group and it was significantly higher than that in CS (p = 0.0001).

**Conclusion:** This study has supported the relationship between PIU and psychopathology among adolescents which is more pronounced in adolescents with ADHD.

J Pediatr. 2010 Dec;157:995-1000.

**PARENTAL ADHD STATUS AND ITS ASSOCIATION WITH PROBAND ADHD SUBTYPE AND SEVERITY.**

**Takeda T, Stotesbery K, Power T, et al.**

**OBJECTIVE:** To better understand the familial transmission of attention deficit hyperactivity disorder (ADHD), a highly heritable disorder, the effects of paternal and maternal ADHD status on probands' ADHD symptoms and subtypes were investigated.

**STUDY DESIGN:** In 323 trios with ADHD, data from a structured interview and a self-report scale (score of >21) were used to determine ADHD probands' diagnostic status and parental ADHD status, respectively. Parental ADHD status on proband ADHD severity and subtypes was investigated.

**RESULTS:** ADHD criteria were endorsed by 23% of fathers and 27% of mothers, and by at least one parent in 41% of the cases. ADHD severity was higher for children whose parents had ADHD versus those whose parents were without it. Paternal ADHD was associated with an increased likelihood of ADHD combined subtype (odds ratio = 3.56) and a decreased likelihood of the inattentive subtype (odds ratio = 0.34) in male children.

**CONCLUSIONS:** Parental ADHD status appears to confer different risks for the severity of hyperactive-impulsive and inattentive symptoms depending on parental sex; however, parental ADHD self-report scale score has low to negligible correlation with proband's ADHD severity. Biparental ADHD does not appear to have an additive or synergistic effect on the proband's ADHD severity.

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J Child Neurol. 2010;25:1325-30.

**ATTENTION PROBLEMS AND PARENT-RATED BEHAVIOR AND STRESS IN YOUNG CHILDREN AT RISK FOR DEVELOPMENTAL DELAY.**

**Tervo RC.**

The aim of this article is to characterize the neurobehavior of young children at risk for developmental delay and attention problems. Two hundred and eighty-one children, ages 18 to 70 months, were evaluated. All parents/guardians completed the Child Development Inventory, Child Behavior Checklist for Ages 11/2 to 5, Inventory for Client and Agency Planning, and Parenting Stress Index-Short Form. All children had significant delays (developmental ratios <.70). A Mann-Whitney U test compared those with and without attention problems (T score >70). A 2-tailed P value of <.05 indicated statistical significance. Children with attention problems were more likely to have withdrawn behavior, sleep problems, and aggressive behavior. All had severe problem behaviors, and their families experienced significant stress. Attention problems and other serious problem behaviors occur frequently in young children at risk for developmental delay. Parental stress warrants prompt intervention for their children and positive supports for them.

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Res Dev Disabil. 2011;32:75-80.

**COINCIDENCE OF HOMOPHONE SPELLING ERRORS AND ATTENTION PROBLEMS IN SCHOOLCHILDREN: A SURVEY STUDY.**

**Tsai LH, Meng LF, Hung LY, et al.**

This article examines the relationship between writing and attention problems and hypothesizes that homophone spelling errors coincide with attention deficits. We analyze specific types of attention deficits, which may contribute to Attention Deficits Hyperactivity Disorder (ADHD); rather than studying ADHD, however, we focus on the inattention dimension of behavior. Our methodology was to develop a survey study for exploring the coincidence of homophone errors and attention problems in schoolchildren. Two sets of parent-questionnaires characterizing individually types of Chinese handwriting errors and behavioral problems in schoolchildren were developed by the research team. Our participants were 491 Taiwanese children from the first to fifth grades in an elementary school in Taipei; they all used traditional Chinese as their primary written language of communication. Based on the ratings of the parent-questionnaires, two groups with proficient and non-proficient homophonic writing were formed. One consisted of children known to have made heterographic homophone errors (words with correct pronunciation but different spellings).

The other (control group) consisted of children known to be proficient in Chinese homophone spellings. In each group, there were 54 boy and girl pupils, matched by gender, age, school and grade. A significant correlation was found between attention deficits and homophone errors. This survey study confirms our hypothesis and strengthens a currently underdeveloped theory in the literature of handwriting that attention impairments play an important role in the production of homophone errors.

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Appetite. 2010;55:679-84.

**DETRIMENTAL EFFECTS OF GUM CHEWING ON VIGILANCE IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.**

***Tucha L, Simpson W, Evans L, et al .***

Impairments of attention are cardinal features of attention deficit hyperactivity disorder (ADHD) and can seriously affect the daily life of children with ADHD. Despite effective treatment strategies, there is a need of further treatment options that can be added to available and well established treatments. Further treatment options are needed since available treatments are often time consuming, expensive and limited regarding their external validity. Recent research demonstrated that gum chewing has beneficial effects on cognition including certain aspects of attention. Therefore, gum chewing may benefit children with ADHD in situations requiring particular cognitive efforts. In a crossover study, attentional functioning of 32 children with ADHD and 32 children without the condition was examined. All participants were assessed with chewing gum and without chewing gum. A computerized test was used for the assessment of vigilance and sustained attention. The findings of the present study suggest that gum chewing during task execution has detrimental effects on vigilance of both healthy children and children with ADHD. Sustained attention was not affected by gum chewing. Chewing gum, therefore, appears not to improve attentional performance in children with ADHD.

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Neurosci Behav Physiol. 2010;40:1034-37.

**EFFICACY OF STRATTERA IN CHILDREN AND ADOLESCENTS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.**

***Vakula IN, Vasyanina Y, Gorbunova ZK, et al.***

Children and adolescents (25 boys, nine girls, aged from six to 17 years) with attention deficit hyperactivity disorder (ADHD) were treated with Strattera at the optimal dose of 1.2 mg/day in out-patient conditions. After use of Strattera for three months, assessment of treatment efficacy demonstrated marked and moderate clinical effects in 78.1% of patients. Psychologists' assessment indicated that 80% of children showed improvements in the volume and rate of switching of attention and almost 60% showed improvements in measures of the stability of attention. EEG studies showed decreases in the "index of slowing" in 70.2% of patients. Strattera was found to have good safety and tolerance in the treatment of children and adolescents with ADHD.

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J Clin Psychiatry. 2010;71:1535-51.

**EFFECTS OF ATOMOXETINE WITH AND WITHOUT BEHAVIOR THERAPY ON THE SCHOOL AND HOME FUNCTIONING OF CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.**

***Waxmonsky JG, Waschbusch DA, Pelham WE, et al.***

**Objective:** To evaluate the effects of atomoxetine alone and in combination with behavior therapy on the school functioning of children with attention-deficit/hyperactivity disorder (ADHD). Most atomoxetine studies have not assessed school functioning other than by measuring the change in ADHD symptoms. Combining behavior therapy with atomoxetine may be particularly beneficial for the academic domain as medication

has not been found to produce sustained benefits in this realm. However, there is little research examining the effects of combining atomoxetine and behavior therapy.

**Method:** In an 8-week open-label trial, 56 children aged 6-12 years with ADHD diagnosed according to DSM-IV-TR were randomly assigned to receive atomoxetine and behavior therapy or atomoxetine alone. Behavior therapy consisted of an 8-week parenting course, a child social skills course, and a teacher-implemented daily report card of classroom behavior. The primary outcome was direct observation of the subject's classroom behavior. Secondary outcomes included change in ADHD symptoms and functioning at home and school. All data were collected between March 2007 and May 2008.

**Results:** Classroom observations showed that atomoxetine decreased rule violations ( $P < .0001$ ). Moreover, atomoxetine was associated with significant improvements in ADHD and oppositional defiant disorder symptoms at home and school and enhanced functioning in both domains (Impairment Rating Scale: all  $P < .001$ ). Combined treatment led to greater improvements in parent-rated symptoms of inattention ( $P < .01$ ), problem behaviors ( $P < .001$ ), and academic impairment ( $P < .05$ ). However, teachers did not report significant group differences.

**Conclusions:** Atomoxetine improved ADHD symptoms and classroom functioning as measured by parents, teachers, and direct observation. The addition of behavior therapy led to further improvements at home but not at school. Trial Registration: [clinicaltrials.gov](http://clinicaltrials.gov) Identifier:

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J Am Acad Child Adolesc Psychiatry. 2011;50:73-84.

**SAFETY AND EFFICACY OF ABT-089 IN PEDIATRIC ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: RESULTS FROM TWO RANDOMIZED PLACEBO-CONTROLLED CLINICAL TRIALS.**

**Wilens TE, Gault LM, Childress A, et al.**

**Objective** To assess the safety and efficacy of ABT-089, a novel (alpha)4(beta)2 neuronal nicotinic receptor partial agonist, vs. placebo in children with attention-deficit/hyperactivity disorder (ADHD).

**Method** Two multicenter, randomized, double-blind, placebo-controlled, parallel-group studies of children 6 through 12 years of age were conducted. Study 1 (n = 274) assessed six treatment groups over 8 weeks: 4 once-daily (QD) ABT-089 doses (0.085-0.700 mg/kg), QD atomoxetine, and placebo. Study 2 (n = 119) assessed three treatment groups over 6 weeks: 2 QD ABT-089 doses (0.7 mg/kg, 1.4 mg/kg) and placebo. The primary efficacy variable was the investigator-administered Attention-Deficit/Hyperactivity Disorder Rating Scale-IV: Home Version (ADHD-RS-IV [HV]) Total Score. Safety was assessed by adverse event (AE) monitoring, laboratory tests, vital signs, physical examinations, and electrocardiogram measures.

**Results** There was no statistically significant difference between ABT-089 and placebo in mean change from baseline to final evaluation of ADHD-RS-IV (HV) Total Score or other outcome measures at any dose in either study. In Study 1, atomoxetine showed statistically significant improvement for the primary and most secondary endpoints. ABT-089 was generally safe and well tolerated, with no statistically significant difference between any ABT-089 dose and placebo in the overall incidence of any specific AE, and no clinically significant changes in other safety measures.

**Conclusions** ABT-089 did not show efficacy on the primary efficacy variable, the ADHD-RS-IV (HV) Total Score, or other measures of ADHD symptomatology in children with ADHD, and had a safety profile similar to placebo. These results contrast with published reports of efficacy of nicotinic modulators in adults with ADHD. Clinical Trial Registry Information- M06-888 (Study 1): A Safety and Efficacy Study of ABT-089 in Children With Attention-Deficit/Hyperactivity Disorder (ADHD), URL: <http://clinicaltrials.gov>, unique identifier: NCT00528697. M10-345 (Study 2): Safety and Tolerability Study of ABT-089 in Children With Attention-Deficit/Hyperactivity Disorder (ADHD), URL: <http://clinicaltrials.gov>, unique identifier: NCT00640419.

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Cortex: A Journal Devoted to the Study of the Nervous System and Behavior. 2010 Nov;46:1345-61.

**ETIOLOGY AND NEUROPSYCHOLOGY OF COMORBIDITY BETWEEN RD AND ADHD: THE CASE FOR MULTIPLE-DEFICIT MODELS.**

**Willcutt EG, Betjemann RS, McGrath LM, et al .**

**Introduction:** Attention-deficit/hyperactivity disorder (ADHD) and reading disability (RD) are complex childhood disorders that frequently co-occur, but the etiology of this comorbidity remains unknown.

**Method:** Participants were 457 twin pairs from the Colorado Learning Disabilities Research Center (CLDRC) twin study, an ongoing study of the etiology of RD, ADHD, and related disorders. Phenotypic analyses compared groups with and without RD and ADHD on composite measures of six cognitive domains. Twin analyses were then used to test the etiology of the relations between the disorders and any cognitive weaknesses.

**Results:** Phenotypic analyses supported the hypothesis that both RD and ADHD arise from multiple cognitive deficits rather than a single primary cognitive deficit. RD was associated independently with weaknesses on measures of phoneme awareness, verbal reasoning, and working memory, whereas ADHD was independently associated with a heritable weakness in inhibitory control. RD and ADHD share a common cognitive deficit in processing speed, and twin analyses indicated that this shared weakness is primarily due to common genetic influences that increase susceptibility to both disorders.

**Conclusions:** Individual differences in processing speed are influenced by genes that also increase risk for RD, ADHD, and their comorbidity. These results suggest that processing speed measures may be useful for future molecular genetic studies of the etiology of comorbidity between RD and ADHD.

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Sleep Med. 2011;12:5-6.

**RESTLESS LEGS SYNDROME MOTHERS AND ATTENTION-DEFICIT/HYPERACTIVITY DISORDER CHILDREN: WHAT HAPPENED BETWEEN THEM?**

**Xiong L, Rouleau GA.**

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J Am Acad Child Adolesc Psychiatry. 2010;49:1225-37.

**QUALITY OF CARE FOR CHILDHOOD ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN A MANAGED CARE MEDICAID PROGRAM.**

**Zima BT, Bussing R, Tang L, et al.**

**Objective** To examine whether clinical severity is greater among children receiving attention-deficit/hyperactivity disorder (ADHD) care in primary care compared with those in specialty mental health clinics, and to examine how care processes and clinical outcomes vary by sector across three 6-month time intervals.

**Method** This was a longitudinal cohort study of 530 children aged 5 to 11 years receiving ADHD care in primary care or specialty mental health clinics from November 2004 through September 2006 in a large, countywide managed care Medicaid program.

**Results** Clinical severity at study entry did not differ between children who received ADHD care in solely primary or specialty mental health care clinics. At three 6-month intervals, receipt of no care ranged from 34% to 44%, and unmet need for mental health services ranged from 13% to 20%. In primary care, 80% to 85% of children had at least one stimulant prescription filled and averaged one to two follow-up visits per year. Less than one-third of children in specialty mental health clinics received any stimulant medication, but all received psychosocial interventions averaging more than five visits per month. In both sectors, stimulant medication refill prescription persistence was poor (31%49%). With few exceptions, ADHD diagnosis, impairment, academic achievement, parent distress, and parent-reported treatment satisfaction, perceived benefit, and improved family functioning did not differ between children who remained in care and those who received no care.

**Conclusion** Areas for quality improvement are alignment of clinical severity with provider type, follow-up visits, stimulant use in specialty mental health, agency data infrastructure to document delivery of evidence-based psychosocial treatment, and stimulant medication refill prescription persistence.





Vi ricordiamo che il **15 gennaio** si chiudono le iscrizioni per le seguenti iniziative:

## **VII edizione del Master annuale "L'APPROCCIO COGNITIVO-COMPORTAMENTALE AI DISTURBI DELL'ETA' EVOLUTIVA"**

*Con il Patrocinio dell'Associazione Italiana Di Analisi e Modificazione del Comportamento e Terapia Comportamentale e Cognitiva (AIAMC)*

### **Firenze - Gennaio - Novembre 2011**

Alla precedente edizione del master sono stati attribuiti **44 crediti ECM per medici e psicologi**

L'interesse per le **problematiche psicologiche dell'infanzia** e dell'adolescenza sta rapidamente aumentando; il lavoro in ambito evolutivo per i clinici, neuropsichiatri infantili e/o psicologi che siano, implica spesso un impegno notevole e l'acquisizione di **tecniche e procedure specifiche**.

All'interno dell'approccio **cognitivo-comportamentale** sono state sviluppate metodiche efficaci per affrontare il disagio e le sindromi psicopatologiche dell'età evolutiva attraverso la consulenza psicologica.

Il **Master** si propone di offrire un ventaglio esaustivo di tali sindromi, delle modalità di assessment e delle strategie d'intervento, secondo l'**approccio cognitivo comportamentale** alla consulenza psicologica.

**Direzione scientifica e didattica: Prof. Fabio Celi** (Università di Parma)

**Docenti: Dott.ssa Laura Bertolo**, ASL 1 - Massa Carrara - **Dott.ssa Alessandra Carrozza**, Istituto di Psicologia e Psicoterapia Comportamentale e Cognitiva di Firenze - **Prof. Fabio Celi**, Università di Parma - **Dott.ssa Ljanka Dal Col**, Laboratorio Psicoeducativo, Belluno - **Dott. Gabriele Masi**, IRCCS Stella Maris, Calambrone (PI) - **Dott. Gabriele Melli**, Istituto di Psicologia e Psicoterapia Comportamentale e Cognitiva di Firenze - **Dott.ssa Sara Pezzica**, Presidente AIDAI Toscana - **Dott.ssa Federica Rossi**, Istituto Miller, Genova

**Durata e sede del corso:** Il Master ha una durata annuale. Sono previste **15 giornate di lezione** (ore 9.30-18.30), per un totale di 120 ore di lezione, comprese le esercitazioni, organizzate in **8 week-end intensivi** (sabato e domenica).

**Destinatari:** Il Master è aperto ai medici (psichiatri o neuropsichiatri infantili) ed agli psicologi.

Per informazioni ed iscrizioni: [www.ipsico.org](http://www.ipsico.org)

**Il edizione del corso gratuito di formazione:  
"Il disturbo ossessivo-compulsivo: modelli di comprensione e strategie di  
trattamento cognitivo-comportamentali"**

**Organizzato dall'Associazione Italiana Disturbo Ossessivo-Compulsivo (AIDOC)**

Docenti: A. Gagnani, F. Mancini, G. Melli, A. Pinto.

**Roma, 4-5 Febbraio - 11-12 Marzo - 8-9 Aprile 2011.**

Il corso, vista la sua natura altamente specialistica, è riservato a Psicologi o Medici già psicoterapeuti, o in corso avanzato (dal III anno) di formazione, preferibilmente di **approccio cognitivo-comportamentale**, che abbiano già competenze di base sulla terapia cognitiva e sul **trattamento del Disturbo Ossessivo-Compulsivo**.

E' finalizzato a formare colleghi che vogliono approfondire le proprie conoscenze relativamente alle più aggiornate strategie d'intervento sul DOC e ad entrare a far parte della rete dei terapeuti dell'Associazione.

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Per informazioni e iscrizioni: [www.aidoc.it](http://www.aidoc.it).

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Iniziativa nell'ambito del Progetto di Neuropsichiatria dell'Infanzia e dell'adolescenza  
Il Progetto è realizzato con il contributo, parziale, della Regione Lombardia  
(in attuazione della D.G.R. n. 10804 del 16/12/2009)  
Capofila Progetto: UONPIA Azienda Ospedaliera "Spedali Civili di Brescia"  
"Condivisione dei percorsi diagnostico-terapeutici per l'ADHD in Lombardia".

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**ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI**  
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