



ADHD

ATTENTION DEFICIT HYPERACTIVITY DISORDER


Laboratorio per la Salute
Materno Infantile


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Eur Child Adolesc Psychiatry. 2009;18:465-75.

Effects of maternal and paternal smoking on attentional control in children with and without ADHD.

Altink ME, Slaats-Willemsen DIE, Rommelse NNJ, et al.

Maternal smoking during pregnancy is a risk factor for attention-deficit/ hyperactivity disorder (ADHD), but data on its adverse effects on cognitive functioning are sparse and inconsistent. Since the effect of maternal smoking during pregnancy may be due to correlated genetic risk factors rather than being a pure environmental effect, we examined the effect of prenatal exposure to smoking on attentional control, taking into account the effects of both maternal and paternal smoking, and examined whether these effects were genetically mediated by parental genotypes. We further examined whether the effect of prenatal exposure to smoking on attentional control interacted with genotypes of the child. Participants were 79 children with ADHD, ascertained for the International Multi-centre ADHD Gene project (IMAGE), and 105 normal controls. Attentional control was assessed by a visual continuous performance task. Three genetic risk factors for ADHD (DRD4 7-repeat allele of the exon 3 variable number of tandem repeats (VNTR), DAT1 10/10 genotype of the VNTR located in the 3 untranslated region, and the DAT1 6/6 genotype of the intron 8 VNTR) were included in the analyses. Paternal smoking had a negative effect on attentional control in children with ADHD and this effect appeared to be mediated by genetic risk factors. The prenatal smoking effect did not interact with genotypes of the child. Maternal smoking had no main effect on attentional control, which may be due to lower smoking rates. This study suggests that the effects of paternal smoking on attentional control in children with ADHD should be considered a proxy for ADHD and/or smoking risk genes. Future studies should examine if the results can be generalized to other cognitive domains.

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J Child Adolesc Psychopharmacol. 2009;19:301-04.

Examining parental nonresponse to stimulant treatment questions according to ethnicity.

Barnard-Brak L, To Y.

Objective: The purpose of this study was to examine parental response or nonresponse to the question of whether their child with attention-deficit= hyperactivity disorder (ADHD) received stimulant treatment as a function of ethnicity.

Method: A sample of 2,844 students diagnosed with ADHD, ages 6-12, beginning during the 2000-2001 academic school year from the most recent wave of the Special Education Elementary Longitudinal Study (SEELS) was used. Parental response versus nonresponse to the question of stimulant treatment was examined.

Results: Parents who were African American or Hispanic were more likely not to respond to the question as to whether their child with ADHD received stimulant treatment as compared to parents who were white. This nonresponse bias was unrelated to nonresponse in the variable of household income.

Conclusions: This nonresponse bias among parents who were African American or Hispanic may be indicative of parental attitudes toward stimulant treatment. Research should be cautious in drawing conclusions from self-report data regarding stimulant treatment according to ethnicity.

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

Aust New Zealand J Psychiatry. 2009;43:722-30.

Neurocognitive function in attention-deficit-hyperactivity disorder with and without comorbid disruptive behaviour disorders.

Barnett R, Maruff P, Vance A.

Objective: The aim of the present study was to examine the effect of comorbid oppositional defiant disorder (ODD) and conduct disorder (CD) on (i) symptom levels in attention-deficit-hyperactivity disorder (ADHD) and (ii) the relationship between neurocognitive impairment and ADHD symptom severity.

Method: A total of 200 6-12-year-old children with DSM-IV ADHD, combined type (ADHD-CT) were identified in a specialist ADHD clinic in metropolitan Melbourne. From this initial group, 23 were identified with ADHD without ODD/CD (ADHD alone), 22 had ADHD and ODD and 20 had ADHD and CD. All the children were medication naive. Twenty-five healthy control children were also recruited from local primary schools. The four groups did not differ in age, gender or full-scale IQ. A cross-sectional study of parent- and teacher-reported ADHD and externalizing symptoms, spatial span, spatial working memory, visuospatial memory, spatial recognition, spatial planning and behavioural inhibition was completed.

Results: Parent-reported externalizing symptoms were higher in the ADHD + CD and ADHD + ODD groups compared to the ADHD alone group. There were no differences in neurocognitive function between children with ADHD-CT with and without ODD or CD. All the ADHD groups, however, performed worse than the healthy control group. Further, worse spatial span, spatial working memory and delayed matching to sample performance were associated with increased teacher-reported ADHD symptoms in the ADHD alone group. Also, worse spatial working memory performance was associated with increased teacher-reported ADHD symptoms in the ADHD + CD group.

Conclusions: ADHD symptom severity is associated with the magnitude of impairment in executive functions in children with ADHD alone, but these relationships can be obscured by the presence of comorbid disruptive disorders. Children with ADHD + CD may demonstrate similar associations to children with ADHD alone, suggesting a similar underlying dysfunction. ADHD + ODD, however, may be better understood as a maladaptive response to the abnormal behaviours and neurocognitive functions in ADHD.

Biol Psychiatry. 2009;66:398-401.

Electroencephalogram (theta)/(beta) Ratio and Arousal in Attention-Deficit/Hyperactivity Disorder: Evidence of Independent Processes.

Barry RJ, Clarke AR, Johnstone SJ, et al.

Background: For nearly 20 years, the (theta)/(beta) power ratio in the electroencephalogram (EEG) has been used within the attention-deficit/hyperactivity disorder (ADHD) literature as a marker of central nervous system (CNS) arousal, underpinning current models of the disorder. However, this usage has not been validated. We aimed to directly test the (theta)/(beta) ratio as a marker of arousal within this population.

Methods: Resting state EEG activity was investigated as a function of CNS arousal in two age-matched groups of boys (each $n = 30$), with and without ADHD. Arousal was defined in terms of skin conductance level (SCL), which has a long history as a measure of CNS arousal.

Results: Relative (theta) power and the (theta)/(beta) ratio were elevated, and SCL and relative (alpha) and (beta) power were reduced, in the ADHD group compared with control subjects. In both groups, mean (alpha) level correlated negatively with SCL. There was no significant correlation between the (theta)/(beta) ratio and SCL.

Conclusions: These data contradict the supposed linkage between the (theta)/(beta) ratio and arousal in ADHD, confirming previous results from normal children. They suggest the need for reevaluation of current models of the disorder and reconceptualization of existing EEG data from both normal and atypical populations.

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Clin Pediatr. 2009;48:723-33.

Once-daily atomoxetine for treating pediatric attention-deficit/ hyperactivity disorder: Comparison of morning and evening dosing.

Block SL, Kelsey D, Coudry D, et al.

In this 3-arm, randomized, double-blind trial, once-daily morning-dosed atomoxetine, evening-dosed atomoxetine, and placebo were compared for treating pediatric attention-deficit/hyperactivity disorder (ADHD). Patients received morning atomoxetine/evening placebo ($n = 102$), morning placebo/evening

atomoxetine (n = 93), or morning placebo/evening placebo (n = 93) for about 6 weeks. Core symptom efficacy was measured at weeks 0, 1, 3, and 6. Parent assessments of the child's home behaviors in the evening and early morning were collected daily during the first 2 weeks of treatment. Morning-dosed and evening-dosed atomoxetine significantly decreased core ADHD symptoms relative to placebo and produced symptom improvements that were measured up to 24 hours later. Morning dosing was superior to evening dosing on some efficacy measures. Evening dosing showed greater tolerability with significantly more patients receiving morning atomoxetine reporting at least 1 adverse event than those receiving evening atomoxetine.

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Am J Public Health. 2009;99:1423-30.

Work injury risk among young people with learning disabilities and attention-deficit/hyperactivity disorder in Canada.

Breslin FC, Pole JD.

Objectives. We sought to gain a better understanding of the relationship between learning disabilities, attention-deficit/hyperactivity disorder (ADHD), and risk of occupational injury among young workers.

Methods. We assessed 15- to 24-year-old workers (n=14379) from cycle 2.1 of the Canadian Community Health Survey (CCHS). We gathered data on demographic characteristics, work-related factors, and presence of learning disabilities or ADHD. We conducted a multivariate logistic regression analysis to assess occurrences of medically attended work injuries.

Results. There was an 89% adjusted increase in work injury risk among workers with self-reported dyslexia (a type of learning disability) relative to workers reporting no learning disabilities, although this result did not meet traditional statistical significance criteria. Being out of school, either with or without a high school diploma, was associated with a significantly increased risk of work injury, even after control for a number of demographic and work-related variables.

Conclusions. Our findings underscore the notion that individual differences salient in the education system (e.g., learning disabilities, school dropout) need to be integrated into conceptual models of injury risk among young workers.

Yeni Symp. 2009;47:142-46.

The characteristics of adolescents who referred to child and adolescent psychiatry clinic .

Celik G, Tahiroglu A, Avci A, et al.

Objective: The aims of this study are to determine the relation among psychiatric and co-morbid diagnosis, age, gender in the adolescent who were treated in Cukurova University Child and Adolescent Psychiatry Department in 2004-2005.

Method: participants were 297 adolescent who were 12-18 years old. Cases were collected from patient files as retrospectively. Psychometric scales were Child depression inventory, State-Trait Anxiety Inventory for Children 1 and 2, Maudsley Obsessive Compulsive Questionnaire, Conner's Parent Rating Scale, and Conner's Teacher Rating Scales. Statistical analyzes were performed with SPSS windows [11.00] pocket program.

Findings: 171 [57.6%] of cases were boys and 126 [42.4%] were girls. Average age was 13.3(plus or minus)1.1. The most common diagnose was Attention Deficit Hyperactivity Disorder [ADHD] followed by anxiety disorders and mood disorders. While ADHD, anxiety disorders, mental retardation and adolescence difficulties were more common in boys, mood disorders were more common in girls. Child depression inventory, State-Trait Anxiety Inventory for Children 1 and 2, Maudsley Obsessive Compulsive Questionnaire of boys were significantly higher than girls. 189 cases had least one co-morbid disorder. The most common comorbid diagnose was mental retardation ADHD, anxiety disorders in mood disorders and another anxiety disorder in anxiety disorders. There were positive correlation between to have comorbid diagnose and symptom severity.

Discussion: In this study similarly priority findings ADHD and conduct disorder were most common diagnosis. Clinical severity of disorders was associated comorbid diagnosis that seen very often than expected results; thereby comorbidities are important diagnosing and treating psychiatric conditions.

Conclusion: Mental disorders seen during adolescence may be persistent in adult lifetime and may affect individual life quality. That symptoms and findings of disorders diagnosed and treated priority may be protective about public health. In addition to diagnostic classification should have taken into account the

other variables such as developmental properties, age, gender, comorbidity when evaluating of adolescence patient.

J Child Psychol Psychiatry Allied Discip. 2009;50:1064-72.

Abnormal spatial asymmetry of selective attention in ADHD .

Chan E, Mattingley JB, Huang-Pollock C, et al.

Background: Evidence for a selective attention abnormality in children with attention deficit hyperactivity disorder (ADHD) has been hard to identify using conventional methods from cognitive science. This study tested whether the presence of selective attention abnormalities in ADHD may vary as a function of perceptual load and target lateralisation. Given evidence of right-hemisphere dysfunction in ADHD we predicted increased interference effects for right, but not left-sided target displays, particularly under low perceptual load.

Method: Fourteen children with ADHD-C and 14 typically developing children were tested on a modified flanker task under low and high perceptual load. We also sought evidence for our hypothesis in a re-analysis of an independent data set (42 ADHD; 34 typically developing) in which load effects on selective attention in ADHD were previously examined (Huang-Pollock, Nigg, & Carr, 2005).

Results: As predicted, all children showed evidence of greater interference by flankers under low compared with high perceptual load conditions. Crucially, however, children with ADHD showed the greatest interference effect for right-sided target displays under low but not high perceptual load. In contrast, typically developing children showed the greatest interference for left-sided target displays. The magnitude of interference for right-sided targets was also positively correlated with ADHD symptom levels. Re-analysis of an independent data set (Huang-Pollock et al., 2005) further confirmed our findings.

Conclusions: This study demonstrates that interference effects in children with ADHD and typically developing children are spatially asymmetrical but opposite in direction. The pattern of right-sided interference effects in children with ADHD suggests disruption within right hemisphere attentional networks in ADHD.

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Am J Public Health. 2009;99:878-84.

Perceived racial/ethnic discrimination among fifth-grade students and its association with mental health.

Coker TR, Elliott MN, Kanouse DE, et al.

Objectives. We sought to describe the prevalence, characteristics, and mental health problems of children who experience perceived racial/ethnic discrimination.

Methods. We analyzed cross-sectional data from a study of 5147 fifth-grade students and their parents from public schools in 3 US metropolitan areas. We used multivariate logistic regression (overall and stratified by race/ethnicity) to examine the associations of sociodemographic factors and mental health problems with perceived racial/ethnic discrimination.

Results. Fifteen percent of children reported perceived racial/ethnic discrimination, with 80% reporting that discrimination occurred at school. A greater percentage of Black (20%), Hispanic (15%), and other (16%) children reported perceived racial/ethnic discrimination compared with White (7%) children. Children who reported perceived racial/ethnic discrimination were more likely to have symptoms of each of the 4 mental health conditions included in the analysis: depression, attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder. An association between perceived racial/ethnic discrimination and depressive symptoms was found for Black, Hispanic, and other children but not for White children.

Conclusions. Perceived racial/ethnic discrimination is not an uncommon experience among fifth-grade students and may be associated with a variety of mental health disorders.

Biol Psychiatry. 2009;66:368-75.

Association of Attention-Deficit/Hyperactivity Disorder with a Candidate Region for Reading Disabilities on Chromosome 6p.

Couto JM, Gomez L, Wigg K, et al.

Background: Reading disabilities (RD) and attention-deficit hyperactivity/disorder (ADHD) are two common childhood disorders that co-occur by chance more often than expected. Twin studies and overlapping genetic linkage findings indicate that shared genetic factors partially contribute to this comorbidity. Linkage of ADHD to 6p, an identified RD candidate locus, has previously been reported, suggesting the possibility of a pleiotropic gene at this locus. RD has been previously associated with five genes in the region, particularly DCDC2 and KIAA0319.

Methods: To test whether these genes also contribute to ADHD, we investigated markers previously associated with RD for association with ADHD and ADHD symptoms in a sample of families with ADHD (n = 264). Markers were located in two subregions, VMP/DCDC2 and KIAA0319/TTRAP.

Results: Across all analyses conducted, strong evidence for association was observed in the VMP/DCDC2 region. Association was equally strong with symptoms of both inattention and hyperactivity/impulsivity, suggesting that this locus contributes to both symptom dimensions. Markers were also tested for association with measures of reading skills (word identification, decoding); however, there was virtually no overlap in the markers associated with ADHD and those associated with reading skills in this sample.

Conclusions: Overall this study supports a previous linkage study of ADHD indicating a risk gene for ADHD on 6p and points to VMP or DCDC2 as the most likely candidates.

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J Abnorm Child Psychol. 2009;37:857-71.

Associations of lifetime depression with trauma exposure, other environmental adversities, and impairment in adolescents with ADHD.

Daviss WB, Diler RS, Birmaher B.

Depression is a common, potentially devastating comorbidity in youth with attention-deficit/hyperactivity disorders (ADHD). Various environmental adversities are well-described as correlates of depression in general pediatric populations, but not in youth with ADHD. In 104 adolescents with ADHD, we examined potential environmental correlates of lifetime depression, including trauma exposure, recent negative life events and current parent-child conflict, along with current and past ADHD severity and current impairment. Controlling for demographic variables, comorbid disorders, and ADHD severity, we noted significant associations between lifetime depression and environmental adversities, including victimization trauma, parent-child conflict, and behaviorally-independent negative life events. Current impairment but not ADHD severity was also highly associated with lifetime depression, controlling for the same covariates. Findings from this preliminary, cross-sectional study suggest that environmental adversities and impairment in youth with ADHD should also be targeted along with the ADHD when contemplating strategies to treat or prevent comorbid depression.

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Psychiatrie. 2009;13:27-28.

Clinical and genetic markers in adolescents with persistent form of ADHD: Results of a longitudinal study.

Drtilkova I, Sery O, Theiner P, et al.

Within a follow-up of an association study, in which polymorphisms of selected genes in 119 boys diagnosed with ADHD (aged 7-13) as well as in a control group were analyzed, clinical and genetic markers in 40 adolescents aged 14-18 were studied in the context of the persistent form of ADHD. The relationship between TaqI polymorphism of the DRD2 gene (newly ANKK gene polymorphism) and ADHD was confirmed and newly the relationship between ADHD and polymorphisms of 5-HTT and DRD5 genes was found. Remissions correlated with the polymorphisms of the IL-6 and ACE genes. Increased impulsivity in adolescence was found.

J Child Adolesc Psychopharmacol. 2009;19:253-63.

Evaluation of patients' and parents' quality of life in a randomized placebo-controlled atomoxetine study in attention-deficit/hyperactivity disorder.

Escobar R, Montoya A, Polavieja P, et al.

Objective: The aim of this study was to demonstrate the superior efficacy of atomoxetine with respect to placebo and to compare parent and child perceptions of health-related quality of life (HRQoL).

Method: This randomized, placebo-controlled, 12-week parallel clinical trial included 151 untreated children=adolescents with newly diagnosed attention-deficit=hyperactivity disorder (ADHD). Parents' and patients' reports of HRQoL were obtained separately using the Child Health and Illness Profile and compared using analysis of covariance.

Results: The ADHD Rating Scale baseline mean score was 39.21. Baseline HRQoL was perceived as considerably compromised by parents, especially in the risk avoidance and achievement domains (mean t-scores, 32.47 and 33.16, respectively), but less by children, and restricted to the achievement domain (mean t-score, 41.54). Atomoxetine improved HRQoL with respect to placebo in these two domains as assessed by parents (difference between adjusted mean changes and 95% confidence interval, 8.53, 4.05-13.00 and 3.39, 0.13-6.65) and in the risk avoidance domain by patients (3.56, 1.04-6.07). A modest correlation of clinical severity with HRQoL was found in this clinical population.

Conclusions: This study confirms prior reports the impact of ADHD on the HRQoL of patients as assessed by their parents. The patients' perspective is of a lesser impact. Atomoxetine improved HRQoL as assessed by both parents and patients.

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J Speech Lang Hear Res. 2009;52:915-29.

Sustained attention in children with specific language impairment (SLI).

Finneran DA, Francis AL, Leonard LB.

Purpose: Information-processing limitations have been associated with language problems in children with specific language impairment (SLI). These processing limitations may be associated with limitations in attentional capacity, even in the absence of clinically significant attention deficits. In this study, the authors examined the performance of 4- to 6-year-old children with SLI and their typically developing (TD) peers on a visual sustained attention task. It was predicted that the children with SLI would demonstrate lower levels of performance in the absence of clinically significant attention deficits.

Method: A visual continuous performance task (CPT) was used to assess sustained attention in 13 children with SLI (M = 62.07 months) and 13 TD age-matched controls (M = 62.92 months). All children were screened for normal vision, hearing, and attention. Accuracy (d') and response time were analyzed to see if this sustained attention task could differentiate between the 2 groups.

Results: The children with SLI were significantly less accurate but not significantly slower than the TD children on this test of visual sustained attention.

Conclusion: Children with SLI may have reduced capacity for sustained attention in the absence of clinically significant attention deficits that, over time, could contribute to language learning difficulties.

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Behav Neurol. 2008;20:107-12.

Tactile sensory dysfunction in children with ADHD.

Ghanizadeh A.

Objectives: While a group of children with ADHD may have normal behavioral responses to sensory stimuli, another group may be hyperreactive. The aim of this survey was studying association of tactile sensory responsivity with co-morbidity of oppositional defiant disorder (ODD) symptoms, subtypes of ADHD, and gender in children with ADHD.

Methods: The subjects were 81 children with ADHD from a child psychiatry clinic. The diagnoses were made according to DSM-IV diagnostic criteria. Tactile dysfunction Checklist was used to assess the three types of tactile sensory dysfunction including Hypersensitivity, hyposensitivity, and poor tactile perception and discrimination (PTPD).

Results: Their mean age was 8.4 (SD = 1.9) years. None of the gender, number of symptoms of ODD co-morbidity, and ADHD subtypes was as a predictor of scores of Hyposensitivity and PTPD subscales. Tactile defensiveness was not different between genders and different subtypes of ADHD.

Conclusions: Number of ODD symptoms in children with ADHD is a predictor in association with hypersensitivity score of tactile sensory function. Girls are no more than the boys impaired in Hypersensitivity aspect. Different subtypes of ADHD are not distinct disorders regarding to tactile sensory function.
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J Child Adolesc Psychopharmacol. 2009;19:227-32.

Effects of application to two different skin sites on the pharmacokinetics of transdermal methylphenidate in pediatric patients with attention-deficit/ hyperactivity disorder.

Gonzalez MA, Campbell D, Rubin J.

Objective: This study was conducted to quantify the rate and extent of methylphenidate (MPH) absorption from a transdermal system when applied to two different skin sites in pediatric subjects with attention-deficit=hyperactivity disorder (ADHD).

Methods: In an open-label, single-dose, randomized, two-way crossover study, children (6-12 years) with ADHD were randomized to wear one MPH transdermal system (MTS) on the hip area or on the scapular area for 16 hours. The following week, subjects were crossed over to the opposite application site. Serial blood samples were collected after each MTS application and pharmacokinetic (PK) parameters for d,l-MPH were calculated. Worn MTS units were assayed to calculate the Apparent Dose absorbed from MTS.

Results: PK analyses included 23 subjects. Hip and scapular application resulted in quantifiable levels of d,l-MPH, with approximately 31% higher bioavailability upon hip application. Logarithm transformed mean ratios for area under the curve (AUC) and Cmax indicated a lack of equivalence between the two sites.

Conclusion: MTS applied to both hip and scapular areas resulted in quantifiable plasma levels of d,l-MPH. Bioavailability of MPH from the same transdermal delivery system appears to differ substantially when applied to two different skin surfaces in young children but with similar overall skin effects assessments.

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J Child Adolesc Psychopharmacol. 2009;19:233-39.

Dopamine transporter genotype and stimulant side effect factors in youth diagnosed with attention-deficit/hyperactivity disorder.

Gruber R, Joobar R, Grizenko N, et al.

The dopamine transporter locus (DAT1) has been studied as a risk factor for attention-deficit=hyperactivity disorder (ADHD) and in pharmacogenetic studies of stimulant response. Several prospective studies have reported an association between the homozygous 9 repeat allele of the DAT1 30 untranslated region (UTR) variable number tandem repeat (VNTR) (DAT1 30) and decreased efficacy of methylphenidate (MPH). We hypothesized that children with the 9=9 genotype would display higher rates of specific stimulant side effects. Data on adverse events and DAT1 30 genotypes were combined from two, double-blind, placebo-controlled, crossover studies of MPH conducted in child psychiatric outpatient clinics in Montreal and Washington, D.C. There were 177 participants, 5-16 years old (mean age = 8.99, standard deviation [SD]= 2), with ADHD. Parents completed the Stimulant Side Effect Scale (SERS) after a week of placebo and a week of MPH treatment. Principal components analysis of the SERS resulted in three factors: Emotionality, Somatic Complaints, and Over-focused. Children with the 9=9 genotype displayed higher scores on the Emotionality factor during placebo than children with the 9=10 and the 10=10 genotype, and their Emotionality scores increased further during MPH treatment ($F[2,151] = 3.24, p(0.05)$). Children with the 10=10 genotype displayed a significant increase in Somatic Complaint factor scores during MPH treatment relative to the other genotype groups ($F[2,150] = 3.4, p(0.05)$). These data provide suggestive evidence that DAT1 variants are differentially associated with specific stimulant side effects. Children with the 9=10 genotype displayed less severe stimulant side-effect ratings than either of the homozygous groups, who each displayed increased susceptibility to different types of adverse events. Preliminary evidence suggests that pharmacogenetic analysis using DAT1 variants shows promise for identifying individuals at increased or decreased risk for poor tolerability. (copyright) 2009 Mary Ann Liebert, Inc

Eur Child Adolesc Psychiatry. 2009;18:493-98.

Atomoxetine in children with attention-deficit hyperactivity disorder with prior stimulant therapy: A prospective open-label study.

Hammerness P, Doyle R, Kotarski M, et al.

The objective of the study is to evaluate the effectiveness and tolerability of atomoxetine in youth, ages 6-17 years with ADHD, who had a prior trial of stimulant treatment. This was a 6-week prospective open-label study of atomoxetine, dosage up to 1.4 mg/kg per day in 34 children and adolescents with DSM-IV ADHD. Primary measures of response included the ADHD Rating Scale (ADHD RS) and the Clinical Global Impression (CGI) Scale. Analyses were intention-to-treat. The treatment with atomoxetine was associated with statistical and clinical significant reduction in clinician rated ADHD RS symptoms, compared with baseline. Statistical significant improvement was attained by the second week of treatment. Fifty-six percent (N = 18) met criteria for our a priori definition of response; much or very much improved on the CGI plus more than 30% reduction in ADHD RS symptoms. In conclusion, atomoxetine was generally well tolerated; 85% of subjects completed the trial. Atomoxetine was effective and well tolerated in a 6-week open study of ADHD youth with a prior history of stimulant treatment. (copyright) 2009 Springer-Verlag

Kaohsiung J Med Sci. 2009;25:357-65.

Effectiveness of Behavioral Parent Therapy in Preschool Children With Attention-Deficit Hyperactivity Disorder.

Huang HL, Lu CH, Tsai HW, et al.

The purpose of this study was to assess the effectiveness of a behavioral parent therapy (BPT) program in children with attention-deficit hyperactivity disorder (ADHD) using multidimensional evaluations, the Child Behavior Checklist (CBCL) and the Teacher Report Form (TRF). Between 2001 and 2005, the parents of 21 preschool children with ADHD were divided into six groups and participated in a series of 11 BPT sessions. Before and after BPT, the parents completed the CBCL, and the teachers completed the TRF. The behavioral and emotional problems of the children showed improvement after the BPT sessions, specifically for the following categories: internalizing problems, anxious/depressed syndromes, somatic complaints, externalizing problems, rule-breaking behaviors, aggressive behaviors, social problems, thought problems, and attention problems. In the DSM-oriented scale of the CBCL, affective problems, anxiety problems, somatic problems, ADHD problems, oppositional defiant disorder problems, and conduct disorder problems showed significant improvements. On the DSM scale of the TRF, Inattention syndrome improved significantly after the BPT sessions, while other syndromes showed non-significant changes. We conclude that the BPT program significantly improved the children's behavioral problems at home and inattention problems at school.

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J Am Acad Child Adolesc Psychiatry. 2009;48:501-10.

Medication adherence in the MTA: Saliva methylphenidate samples versus parent report and mediating effect of concomitant behavioral treatment.

Jensen PS, Pappadopulos E, Chait AR, et al.

OBJECTIVE: Although research supports the use of appropriately administered stimulant medication to treat children with ADHD, poor adherence and early termination undermine the efficacy of this treatment in real-world settings. Moreover, adherence measures often rely on parent report of medication use, and their validity and reliability are unknown.

METHOD: Drawing on data from 254 participants in the NIMH Collaborative Multisite Multimodal Treatment Study of Children With Attention-Deficit/Hyperactivity Disorder, we examine the discrepancy between parents' verbal reports of medication adherence and physiological adherence measures determined via methylphenidate saliva assays collected at four time points during the 14-month treatment period. In addition, we examine the impact of physiologically documented medication adherence on parent- and teacher-reported outcomes through 14 months.

RESULTS: Overall, nearly one fourth (24.5%) of the saliva samples indicated nonadherence. Among subjects, 63 (24.8%) of the 254 participants were nonadherent on 50% or more of their repeated saliva assays. Only 136 (53.5%) of the subjects were adherent at every time point at which saliva assays were taken, indicating that some degree of nonadherence characterized nearly half of all other NIMH Collaborative Multisite Multimodal Treatment Study of Children With Attention-Deficit/ Hyperactivity Disorder-treated

children. Findings also indicated that nonadherence produced greater deleterious effects in children in the medication-only condition compared with those receiving both medication and behavioral treatment.

CONCLUSIONS: Same-day saliva methylphenidate assays suggest that nearly half of the parents are inaccurate informants of their child's ADHD medication adherence and that parents may overestimate actual (physiological) adherence. This finding suggests the need for interventions to improve accuracy of parental report. Clinicians need to focus on adherence enhancement strategies to improve outcomes of children being treated with medication, particularly when benefits are suboptimal. Clinical trial registration information-The NIMH MTA study.

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Neuropsychiatr Enfance Adolesc. 2009;57:468-81.

The Bankruptcy of the links work rebinding psychopathological and therapeutic approach of the young hyperactive child.

Joly F.

The links, liaison, or more precisely the liaison work is a challenge princeps of subjectivation the little man, princeps vector symbolization processes and deployment of the psychic life unique to humans. The liaison work is played out both on the side of the link and to the pulsionnalized environment objects (humans and nonhumans) that populate and animate, as in the link body/psychic via along the path mentalisation and thickening psychic. Pulsionnalization that accompagnies the deployment of transitionality, creation and symbolizations but potentiates that the various functions (cognitive, psychomotor, and socioemotional) in the first development. Functions that potentiate impulse comes first in the development, bud also help to gradually invest in their own operation and through the pleasure of operate. The clinical hyperactive children with attention deficits is unfortunately an exemplary illustration of the bankruptcy of this liaison work, the fragility of relationships both within and between body and outside psyche in relation to other objects and the world. Reading a complex psychopathological polyfactorial and appear in this field of unstable conditions of the child and particularly essential heuristic in terms of links and routes. The multidimensional therapeutic work on it can then be reconsidered in terms of reroutes and reliance work symbolization and links.

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Prog Neuro-Psychopharmacol Biol Psychiatry. 2009;33:939-44.

Verbal but not performance IQ is highly correlated to externalizing behavior in boys with ADHD carrying both DRD4 and DAT1 risk genotypes.

Kebir O, Grizenko N, Sengupta S, et al.

Objective: Attention-deficit/hyperactivity disorder (ADHD) is often associated with reduced IQ and high levels of externalizing behavior (EB). This study tested if DRD4 7-repeat allele and DAT1 10-repeat allele homzygosity interact in modulating correlations between IQ and EB in affected boys.

Methods: Boys (n = 130) between 6 and 12 years of age diagnosed with ADHD were included in the study. IQ and EB were assessed by WISC-III and Child Behavioral Checklist, respectively. The 40 bp variable number tandem repeat (VNTR) of the DAT1 gene and the 48 bp VNTR of the DRD4 gene polymorphisms were genotyped and 4 subgroups were defined by the presence/absence of the DRD4 7-repeat allele and by the presence/absence of the DAT1 10/10 genotype. Correlation coefficients were compared using the Fisher's Z transformation and regression lines by a Potthoff analysis.

Results: In the total sample, all correlation coefficients between EB score and IQ were non significant. Also, no differences in IQ were observed between the 4 genotype groups. However, different pattern of correlations between IQ and EB score appeared. In boys carrying no or only one genetic risk, IQ and EB score were uncorrelated while in children carrying both risk factors, negative and significant correlations emerged. Notably, correlation of EB to verbal IQ was strong ($r = -0.71$) and highly significant ($P < 0.01$) in boys carrying both risk alleles. All pair-wise comparisons of correlation coefficients were significant for EB-verbal IQ correlation. Test of coincidence of regression lines did not show significant differences.

Conclusions: A specific domain of IQ, namely the verbal quotient is highly correlated to the level of EB in boys with ADHD carrying both dopaminergic risk genotypes. Further investigations are required to replicate these results and determine specificity to ADHD.

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J Am Acad Child Adolesc Psychiatry. 2009;48:386-99.

National comorbidity survey replication adolescent supplement (NCS-A): III. concordance of DSM-IV/CIDI diagnoses with clinical reassessments.

Kessler RC, Avenevoli S, Green J, et al.

OBJECTIVE: To report results of the clinical reappraisal study of lifetime DSM-IV diagnoses based on the fully structured lay-administered World Health Organization Composite International Diagnostic Interview (CIDI) Version 3.0 in the U.S. National Comorbidity Survey Replication Adolescent Supplement (NCS-A).

METHOD: Blinded clinical reappraisal interviews with a probability subsample of 347 NCS-A respondents were administered using the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS) as the gold standard. The DSM-IV/CIDI cases were oversampled, and the clinical reappraisal sample was weighted to adjust for this oversampling.

RESULTS: Good aggregate consistency was found between CIDI and K-SADS prevalence estimates, although CIDI estimates were meaningfully higher than K-SADS estimates for specific phobia (51.2%) and oppositional defiant disorder (38.7%). Estimated prevalence of any disorder, in comparison, was only slightly higher in the CIDI than K-SADS (8.3%). Strong individual-level CIDI versus K-SADS concordance was found for most diagnoses. Area under the receiver operating characteristic curve, a measure of classification accuracy not influenced by prevalence, was 0.88 for any anxiety disorder, 0.89 for any mood disorder, 0.84 for any disruptive behavior disorder, 0.94 for any substance disorder, and 0.87 for any disorder. Although area under the receiver operating characteristic curve was unacceptably low for alcohol dependence and bipolar I and II disorders, these problems were resolved by aggregation with alcohol abuse and bipolar I disorder, respectively. Logistic regression analysis documented that consideration of CIDI symptom-level data significantly improved prediction of some K-SADS diagnoses.

CONCLUSIONS: These results document that the diagnoses made in the NCS-A based on the CIDI have generally good concordance with blinded clinical diagnoses.

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Neuropsychiatr Enfance Adolesc. 2009;57:392-403.

Family functioning and symptom's study of ADHD children.

Lemelin G, Lafortune D, Fortier I, et al.

Since family functioning plays an important role in determining the development and prognostic of the child struggling with attention deficit/hyperactivity disorder, it is important to better understand the factors that have the most impact on the family functioning in AD/HD families. Child's AD/HD symptoms severity is one of the factors that most influence family functioning. Therefore, this study sought to examine the child's AD/HD symptoms and comorbid disorders that are most associated with family functioning. The Recherche interdisciplinaire sur l'hyperactivite de l'hopital Sainte-Justine de Montreal (RECIH), an interdisciplinary research program on hyperactivity, recruited 262 families with children with AD/HD between the ages of six and 12. MacMaster's Family Assessment Device studied family functioning, as perceived by parents (usually the mother). Our results support the facts that the severity of oppositional/defiant symptoms of the AD/HD child is the child-specific factors most associated with a dysfunctional family life. This study also demonstrates that the severity of the hyperactivity/impulsivity symptoms is most linked to the emotional dimension of the family functioning. However, altogether these factors only contributed to a small proportion of the family functioning variance. These results show the importance of taking into account symptoms severity as well as other factors such as the parent's characteristics.

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Chin J Contemp Pediatr. 2009;11:562-65.

Correlation of snoring with attention deficit and hyperactivity-impulsivity in school age children from Changsha City.

Li JM, Hu JT, Luo XM, et al.

Objective: To investigate the prevalence of snoring in school age children from Changsha City, and study the correlation of snoring with attention deficit and hyperactivity-impulsivity.

Methods: A total of 1 736 children aged 6 to 12 years were randomly sampled from five districts in Changsha City. Their parents completed the questionnaires about children's sleep conditions and the Attention Deficit Hyperactivity Disorder Diagnostic Scale-Parent Version.

Results: The total incidence rate of frequent snoring was 5.7%. Boys had higher incidence of frequent snoring than girls (7.5% vs 3.8%; $\chi^2 = 18.782$, $P < 0.01$). The incidence of snoring in the 6-to 9-year-old group was higher than that of the 10-to 12-year-old group ($\chi^2 = 9.666$, $P < 0.01$). The incidence of daytime sleepiness in the snoring group was higher than that in the non-snoring group (31.5% vs 25.9%; $\chi^2 = 6.678$, $P < 0.01$). The incidences of larynx choking, sleep apnea, mouth breathing, hyperhidrosis, and awaking for unknown reasons or awaking by choke in the frequent snoring group were significantly higher than in the occasional snoring and the non-snoring groups ($\chi^2 = 37.035$, 27.745, 51.341, 30.975, 45.972 respectively; all $P < 0.01$). The incidences of attention deficit (31.3%) and hyperactivity-impulsivity (18.2%) in the frequent snoring group were the highest, followed by the occasional snoring (16.2% and 9.9% respectively) and the non-snoring groups (13.9% and 8.8% respectively). There were significant differences in the incidence of both attention deficit ($\chi^2 = 20.592$, $P < 0.01$) and hyperactivity-impulsivity ($\chi^2 = 9.067$, $P < 0.05$) between groups.

Conclusions: There is a high incidence of snoring in school age children from Changsha City. Snoring is correlated to attention deficit and hyperactivity-impulsivity. It is essential to pay attention to the mental growth and behavioral problems in children with sleep snoring.

J Am Acad Child Adolesc Psychiatry. 2009;48:431-40.

Oculomotor performance identifies underlying cognitive deficits in attention-deficit/hyperactivity disorder.

Loe IM, Feldman HM, Yasui E, et al.

OBJECTIVE: To evaluate cognitive control in children with attention-deficit/hyperactivity disorder (ADHD) using oculomotor tests of executive function.

METHOD: Cross-sectional study of children aged 8 to 13 years with ADHD ($n = 26$) and controls ($n = 33$) used oculomotor tasks to assess sensorimotor function (visually guided saccades), resistance to peripheral distractors (fixation), response inhibition (antisaccades), and spatial working memory (memory-guided saccades).

RESULTS: All children had intact sensorimotor function and working memory. Children with ADHD showed susceptibility to peripheral distractors and deficits in response inhibition. Increased interstimulus (IS) fixation periods on the antisaccade task were associated with improved performance and decreased reaction times on correct trials for controls but not for children with ADHD. Attention-deficit/hyperactivity disorder-combined and inattentive subtypes showed different patterns of reaction time as a function of IS periods.

CONCLUSIONS: Response inhibition deficits in ADHD on oculomotor tasks are consistent with other studies. The failure of children with ADHD to use IS time to decrease response inhibition errors and reaction time suggests that IS time is not used to prepare a response. These findings highlight the importance of considering cognitive processing components affected by ADHD in addition to core behavioral symptoms, particularly in designing new treatment strategies.

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An Pediatr. 2009;70:562-69.

Children with ADHD: A retrospective description of their behavioural features as toddlers.

Magallon S, Crespo-Eguilaz N, Ecay M, et al.

Objectives: To study the relationship between behavioural profile of children suffering from Attention Deficit Hyperactivity Disorder (ADHD) and the previous behavioural style of these patients as toddlers.

Subjects and methods: We asked the parents of 50 school children with ADHD, and those of 30 controls, to fill in a Spanish version of the Toddler Behaviour Questionnaire (TBQ) from their retrospective perception of their childrens behaviour as toddlers. TBQ items were grouped by factor analysis ; t-Student between the scores of both groups and a multiple correlation analysis of TBQ and DSM-IV-ADHD-RS in each of the groups were used.

Results: Children in the ADHD group were reported by parents to have had a different toddler behavioural profile in comparison to that of control children ($P < 0.05$). These differences were associated with adapting to new environments, mood, regularity and stability of play behaviour. A correlation was found between behavioural profile in DSM-IV- ADHD- RS and TBQ.

Conclusions: The results of this study should be interpreted with caution. However, they suggest that in the fifth trimester of life a particular behavioural style as regards regularity, stability of play, and mood, could

indicate a risk of developing ADHD in the future. This behavioural style should be taken into consideration in rearing and early education prospective studies.

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J Am Acad Child Adolesc Psychiatry. 2009;48:749-56.

Oculomotor anomalies in attention-deficit/hyperactivity disorder: Evidence for deficits in response preparation and inhibition.

Mahone EM, Mostofsky SH, Lasker AG, et al.

OBJECTIVE: To examine patterns of executive and oculomotor control in a group of both boys and girls with attention-deficit/hyperactivity disorder (ADHD).

METHOD: Cross-sectional study of 120 children aged 8 to 12 years, including 60 with ADHD (24 girls) and 60 typically developing controls (29 girls). Oculomotor paradigms included visually guided saccades (VGS), antisaccades, memory-guided saccades, and a go/no-go test, with variables of interest emphasizing response preparation, response inhibition, and working memory.

RESULTS: As a group, children with ADHD demonstrated significant deficits in oculomotor response preparation (VGS latency and variability) and response inhibition but not working memory. Girls, but not boys with ADHD, had significantly longer VGS latencies, even after controlling for differences in ADHD symptom severity. The ADHD subtypes did not differ on response preparation or inhibition measures; however, children with the Inattentive subtype were less accurate on the working memory task than those with the Combined subtype.

CONCLUSIONS: Sex differences in children with ADHD extend beyond symptom presentation to the development of oculomotor control. Saccade latency may represent a specific deficit among girls with ADHD. Copyright (copyright) 2009 American Academy of Child and Adolescent Psychiatry

J Am Acad Child Adolesc Psychiatry. 2009;48:367-79.

National comorbidity survey replication adolescent supplement (NCS-A): I. background and measures.

Merikangas KR, Avenevoli S, Costello EJ, et al.

OBJECTIVE: This article presents an overview of the background and measures used in the National Comorbidity Survey Replication Adolescent Supplement (NCS-A).

METHOD: The NCS-A is a national psychiatric epidemiological survey of adolescents aged 13 to 17 years.

RESULTS: The NCS-A was designed to provide the first nationally representative estimates of the prevalence, correlates, and patterns of service use for DSM-IV mental disorders among U.S. adolescents and to lay the groundwork for follow-up studies of risk and protective factors, consequences, and early expressions of adult mental disorders. The core NCS-A diagnostic interview, the World Health Organization Composite International Diagnostic Interview, is a fully structured research diagnostic interview designed for use by trained lay interviewers. A multiconstruct, multimethod, and multi-informant battery was also included to assess risk and protective factors and barriers to service use. Design limitations due to the NCS-A evolving as a supplement to an ongoing survey of mental disorders of U.S. adults include restricted age range of youths, cross-sectional assessment, and lack of full parental/surrogate informant reports on youth mental disorders and correlates.

CONCLUSIONS: Despite these limitations, the NCS-A contains unparalleled information that can be used to generate national estimates of prevalence and correlates of adolescent mental disorders, risk and protective factors, patterns of service use, and barriers to receiving treatment for these disorders. The retrospective NCS-A data on the development of psychopathology can additionally complement data from longitudinal studies based on more geographically restricted samples and serve as a useful baseline for future prospective studies of the onset and progression of mental disorders in adulthood.

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Journal of Clinical Psychology in Medical Settings. 2009;16:233-42.

Sex differences in effectiveness of extended-release stimulant medication among adolescents with attention-deficit/hyperactivity disorder.

Mikami AY, Cox DJ, Davis MT, et al.

This study examined whether adolescent females with attention-deficit/hyperactivity disorder (ADHD) are differentially responsive than their male counterparts to extended-release stimulant medications. This investigation may bear special importance for an adolescent (as opposed to child) population, because hormonal and metabolism differences between sexes are most likely to emerge at this time. Male (n = 19) and female (n = 16) adolescents, ages 16-19 with ADHD, participated in a randomized, double-blind crossover study evaluating the effectiveness of osmotic-release methylphenidate, extended release amphetamine salts, placebo, and routine limited medication regimen. Medication efficacy was evaluated using ADHD symptom ratings from adolescent self-report and parent report, along with objective measures of inattention and hyperactivity/impulsivity during driving performance and neuropsychological tasks. Males and females were largely equivalent in impairment, and medication was similarly effective in reducing symptoms. No interactions were found between sex and medication on any measure of effectiveness or side effects. This finding suggests that the efficacy and tolerability of extended-release stimulant medications is equivalent for male and female adolescents with ADHD.

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J Am Acad Child Adolesc Psychiatry. 2009;48:484-500.

The MTA at 8 years: Prospective follow-up of children treated for combined-type ADHD in a multisite study.

Molina BSG, Hinshaw SP, Swanson JM, et al.

OBJECTIVES: To determine any long-term effects, 6 and 8 years after childhood enrollment, of the randomly assigned 14-month treatments in the NIMH Collaborative Multisite Multimodal Treatment Study of Children With Attention-Deficit/Hyperactivity Disorder (MTA; N = 436); to test whether attention-deficit/hyperactivity disorder (ADHD) symptom trajectory through 3 years predicts outcome in subsequent years; and to examine functioning level of the MTA adolescents relative to their non-ADHD peers (local normative comparison group; N = 261).

METHOD: Mixed-effects regression models with planned contrasts at 6 and 8 years tested a wide range of symptom and impairment variables assessed by parent, teacher, and youth report.

RESULTS: In nearly every analysis, the originally randomized treatment groups did not differ significantly on repeated measures or newly analyzed variables (e.g., grades earned in school, arrests, psychiatric hospitalizations, other clinically relevant outcomes). Medication use decreased by 62% after the 14-month controlled trial, but adjusting for this did not change the results. ADHD symptom trajectory in the first 3 years predicted 55% of the outcomes. The MTA participants fared worse than the local normative comparison group on 91% of the variables tested.

CONCLUSIONS: Type or intensity of 14 months of treatment for ADHD in childhood (at age 7.0-9.9 years) does not predict functioning 6 to 8 years later. Rather, early ADHD symptom trajectory regardless of treatment type is prognostic. This finding implies that children with behavioral and sociodemographic advantage, with the best response to any treatment, will have the best long-term prognosis. As a group, however, despite initial symptom improvement during treatment that is largely maintained after treatment, children with combined-type ADHD exhibit significant impairment in adolescence. Innovative treatment approaches targeting specific areas of adolescent impairment are needed.

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J Am Acad Child Adolesc Psychiatry. 2009;48:511-18.

Clinical responses to atomoxetine in attention-deficit/hyperactivity disorder: The integrated data exploratory analysis (IDEA) study.

Newcorn JH, Sutton VK, Weiss MD, et al.

OBJECTIVE: Clinical experience suggests that some (but not all) patients with attention-deficit/hyperactivity disorder (ADHD) are highly responsive to the nonstimulant atomoxetine. We conducted a retrospective analysis of randomized controlled trials (RCTs) to identify potential baseline (moderator) and on-treatment (mediator) predictors of responses.

METHOD: Data from 6 U.S. RCTs among patients aged 6 to 18 years were pooled (N = 1,069; subjects treated with atomoxetine, n = 618). Subjects were categorized as much improved ((greater-than or equal to)40% decrease in ADHD Rating Scale-IV-Parent Version: Investigator Administered and Scored total score), minimally improved (25%-<40% decline), or nonresponders (<25% decrease). Logistic regression, analyses of variance, and repeated-measures analyses were used to explore associations between baseline and on-treatment variables, achieving a much improved response at trial endpoint (6-9 weeks).

RESULTS: Forty-seven percent of patients showed a much improved clinical response, and 40% did not respond. Only 13% of the patients had a minimal response. No baseline characteristics predicted achieving a much improved clinical response; the only predictor of achieving this response was being at least minimally improved by treatment week 4 (sensitivity = 81%, specificity = 72%, positive predictive value = 75%, and negative predictive value = 79%).

CONCLUSIONS: Clinical response to atomoxetine was bimodal, with most subjects being either responders who were much improved or nonresponders. There were no demographic or clinical predictors of response. However, subjects who ultimately achieved a much improved response were likely to be at least minimal responders by week 4. The recommendation to consider either augmenting or switching treatment in patients who do not achieve at least this level of response to atomoxetine by 4 weeks offers a method for limiting the extended duration of titration to subjects who are most likely to benefit further, while minimizing the duration of exposure in those less likely to achieve an excellent response.

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Biol Psychiatry. 2009;66:e5-e6.

Prenatal Smoking and Attention-Deficit/Hyperactivity Disorder: DRD4-7R as a Plasticity Gene.

Pluess M, Belsky J, Neuman RJ.

J Neuropsychiatry Clin Neurosci. 2009;21:228-30.

Tyrosine supplements for ADHD symptoms with comorbid phenylketonuria.

Posner J, Gorman D, Nagel BJ.

An Pediatr. 2009;70:553-61.

Parent-child agreement in the health related quality of life (HRQOL) of children with attention-deficit/hyperactivity disorder (ADHD): A longitudinal study.

Rajmil L, Estrada MD, Herdman M, et al.

Objectives: To assess parent-child agreement on changes over a short-term period of time in the HRQOL of children treated for ADHD over a short period of time, and to compare child and parent ratings of children with ADHD with general population norms.

Methods: Prospective study in children 6-12 years old with ADHD. Children and parents completed the Spanish versions of the Child Health and Illness Profile-Child Edition (CHIP- CE) before and after 8 weeks of treatment. CHIP-PE scores at both visits were compared using paired t tests and effect sizes (ES), intra-class correlation coefficients (ICC), and scatter plots. Child and parent ratings were compared with CHIP-CE scores for a general population sample.

Results: Thirty-one children and parents were included in the analysis. The highest change between the first and the follow-up visit was on the Risk Avoidance domain both children and parents (effect size [ES] = 0.24 and 0.40, respectively). The ICC ranged from 0.44 (Satisfaction) to 0.01 (Risk avoidance). Child self-ratings were close to general population values. All domains of the parent version presented standardized means below the reference value sat the baseline visit and closer to the general population norm after treatment.

Conclusions: This study found poor parent-child agreement and suggests that both ratings should be collected in future studies on the impact of ADHD and treatment effectiveness.

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Neuropsychopharmacology. 2009;34:2135-42.

A Haplotype of the Norepinephrine Transporter (Net) Gene Slc6a2 is Associated with Clinical Response to Atomoxetine in Attention-Deficit Hyperactivity Disorder (ADHD).

Ramoz N, Boni C, Downing AM, et al.

Atomoxetine is a specific inhibitor of the norepinephrine transporter (NET) that has demonstrated efficacy in the treatment of children with attention-deficit hyperactivity disorder (ADHD). We investigated whether polymorphisms in the NET/SLC6A2 gene may influence atomoxetine response in ADHD. Two independent cohorts of 160 and 105 ADHD children treated for 6 weeks with atomoxetine (0.5-1.8 mg/kg per day) were genotyped on CYP2D6, which metabolizes atomoxetine, and 108 single nucleotide polymorphisms in the NET/SLC6A2 gene. Response was defined as a minimum decrease of 25% in ADHD Rating Scale IV-Parent Version and a Clinical Global Impression-Severity (CGI-S) score less than or equal to 2 at week 6. Interindividual response was independent of the genetic variants of CYP2D6. Significant ($p < 0.05$) associations between 20 NET/SLC6A2 single nucleotide polymorphisms (SNPs) and clinical efficacy in atomoxetine responders, compared with non-responders, were observed. The genomic region across exons 4 to 9 of NET/SLC6A2, where 36 SNPs have been genotyped, was associated with treatment response in both cohorts ($p < 0.01$, odds ratio 2.2 and $p < 0.026$, odds ratio 6.3, respectively), in the combined cohort ($p < 0.01$, odds ratio 1.83), and in the subgroup of Caucasians only ($p < 0.02$, odds ratio 1.8). Clinical efficacy of atomoxetine treatment in ADHD shows potential dependence upon a series of genetic polymorphisms of its mechanistic target, the norepinephrine transporter. Taking into account the high heritability of ADHD, the significance of the present finding and replication of a similar haplotype allele sequence result in an independent cohort, it is suggested that further assessment of this region could be useful in determining response to atomoxetine in ADHD.

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J Child Psychol Psychiatry Allied Discip. 2009;50:1073-83.

Is prenatal alcohol exposure related to inattention and hyperactivity symptoms in children? Disentangling the effects of social adversity.

Rodriguez A, Olsen J, Kotimaa AJ, et al.

Background: Studies concerning whether exposure to low levels of maternal alcohol consumption during fetal development is related to child inattention and hyperactivity symptoms have shown conflicting results. We examine the contribution of covariates related to social adversity to resolve some inconsistencies in the extant research by conducting parallel analyses of three cohorts with varying alcohol consumption and attitudes towards alcohol use.

Methods: We compare three population-based pregnancy-offspring cohorts within the Nordic Network on ADHD from Denmark and Finland. Prenatal data were gathered via self-report during pregnancy and birth outcomes were abstracted from medical charts. A total of 21,678 reports concerning inattention and hyperactivity symptoms in children were available from the Strengths and Difficulties Questionnaire or the Rutter Scale completed by parents and/or teachers.

Results: Drinking patterns differed cross-nationally. Women who had at least some social adversity (young, low education, or being single) were more likely to drink than those better off in the Finnish cohort, but the opposite was true for the Danish cohorts. Prenatal alcohol exposure was not related to risk for a high inattention-hyperactivity symptom score in children across cohorts after adjustment for covariates. In contrast, maternal smoking and social adversity during pregnancy were independently and consistently associated with an increase in risk of child symptoms.

Conclusions: Low doses of alcohol consumption during pregnancy were not related to child inattention/hyperactivity symptoms once social adversity and smoking were taken into account.

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J Abnorm Child Psychol. 2009;37:793-804.

Comorbid problems in ADHD: Degree of association, shared endophenotypes, and formation of distinct subtypes. Implications for a future DSM.

Rommelse NNJ, Altink ME, Fliers EA, et al.

We aimed to assess which comorbid problems (oppositional defiant behaviors, anxiety, autistic traits, motor coordination problems, and reading problems) were most associated with Attention-Deficit/Hyperactivity Disorder (ADHD); to determine whether these comorbid problems shared executive and motor problems on

an endophenotype level with ADHD; and to determine whether executive functioning (EF)-and motor-endophenotypes supported the hypothesis that ADHD with comorbid problems is a qualitatively different phenotype than ADHD without comorbid problems. An EF-and a motor-endophenotype were formed based on nine neuropsychological tasks administered to 816 children from ADHD-and control-families. Additional data on comorbid problems were gathered using questionnaires. Results indicated that oppositional defiant behaviors appeared the most important comorbid problems of ADHD, followed by autistic traits, and then followed by motor coordination problems, anxiety, and reading problems. Both the EF-and motor-endophenotype were correlated and cross-correlated in siblings to autistic traits, motor coordination problems and reading problems, suggesting ADHD and these comorbid problems may possibly share familial/genetic EF and motor deficits. No such results were found for oppositional defiant behaviors and anxiety. ADHD in co-occurrence with comorbid problems may not be best seen as a distinct subtype of ADHD, but further research is warranted.

Child Care Health Dev. 2009;35:681-90.

An interagency service delivery model for autistic spectrum disorders and attention deficit hyperactivity disorder.

Rowlandson PH, Smith C.

Background: A multiplicity of government initiatives advocate increasing shared working between services to ensure that holistic and co-ordinated assessment of need and related shared intervention is available to children and families. Concurrently, there is an increasing demand upon services to provide a wide range of support for children with complex difficulties.

Methods: On the Isle of Wight, joint services have been developing shared practice. The inter-agency service was initiated in 2001 through a 3-year project funded jointly between all services on the Island and the government through the 'Invest to Save' initiative. The project initially focused upon developing a combined process of diagnosis of autistic spectrum disorders (ASD) and the co-ordination of intervention at schools, within families and in the child's community. Gradually, the service extended to include children with a much wider range of difficulties, including those of attention deficit hyperactivity disorder (ADHD), developmental co-ordination disorder and co-morbid diagnoses.

Results: There are 19000 school-aged children on the Isle of Wight. A total of 1101 referrals have been accepted between June 2001 and May 2007. In total, 201 children have been given a diagnosis of ASD. Overall, 392 children have been given a diagnosis of ADHD or ADHD/ Co-morbid. Seventy were co-morbid for ASD and ADHD. The current service is rated as 85% satisfactory by its users, in contrast to the high level of complaint which resulted in the bid for the project initially.

Conclusion: Following the successful conclusion of the 3-year government-funded project Education Services, Social Care and The Health Authority shared the ongoing funding of the current service. This has been operating effectively for over 6 years and has highlighted a wide variety of issues around this style of service delivery.

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J Child Adolesc Psychopharmacol. 2009;19:215-26.

Long-Term safety and efficacy of guanfacine extended release in children and adolescents with attention-deficit/hyperactivity disorder.

Sallee FR, Lyne A, Wigal T, et al.

Objective: Short-term, controlled studies of extended-release guanfacine (GXR), a selective α_2A -adrenoreceptor agonist, demonstrate efficacy in treating attention-deficit=hyperactivity disorder (ADHD) symptoms as monotherapy. This 2-year open-label study was conducted to further assess the long-term safety and efficacy of GXR.

Methods: Study participants, aged 6-17 years with ADHD, had previously been exposed to GXR therapy alone or in combination with psychostimulants in one of two antecedent trials. In this study, doses were titrated to 1, 2, 3, or 4mg=day of GXR alone or in combination with a psychostimulant. Safety and efficacy data collected at clinic visits over 24 months provided further evidence of the overall safety and efficacy of GXR for treating ADHD.

Results: The majority of adverse events (AEs) were mild to moderate, and few patients discontinued the study because of an AE. Efficacy measures demonstrated significant improvement beginning in the first

month and lasting through the end of the 24-month treatment period. Throughout the entire 2-year study, 202 subjects (77.1%) discontinued and 60 (22.9%) completed the study.

Conclusions: Overall, these data support that GXR monotherapy is generally safe and effective for treating ADHD.

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CNS Drugs. 2009;23:43-49.

Alpha-2 adrenergic agonists in children with inattention, hyperactivity and impulsiveness.

Scahill L.

Although originally developed for the treatment of hypertension, (alpha)2-agonists have been used to treat Tourettes syndrome, attention-deficit hyperactivity disorder (ADHD), developmental disorders and substance abuse for nearly three decades. Based on studies of clonidine, (alpha)2-agonists were presumed to reduce arousal by decreasing the firing of noradrenaline neurons in locus ceruleus. Accumulated preclinical evidence indicates that guanfacine has features in common with clonidine, in addition to other pharmacological effects. Clonidine binds to the three subtypes of (alpha)2-receptors, A, B and C, whereas guanfacine binds more selectively to (alpha)2A-receptors, which appears to enhance prefrontal function. Several reports on the use of the (alpha)2-agonists show improvements in children with ADHD and improvements in hyperactivity, impulsiveness and inattention in children with tic disorders and pervasive developmental disorders. Both clonidine and guanfacine are associated with sedation, fatigue and somnolence. Reductions in heart rate and blood pressure are modest and rarely lead to discontinuation of treatment across these trials.

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BMC Psychiatry. 2009;9:58.

Developmental psychopathology: Attention Deficit Hyperactivity Disorder (ADHD).

Schmidt S, Petermann F.

BACKGROUND: Attention Deficit/Hyperactivity Disorder (ADHD), formerly regarded as a typical childhood disorder, is now known as a developmental disorder persisting over the lifespan. Starting in preschool-age, symptoms vary depending on the age group affected.

METHOD: According to the variability of ADHD-symptoms and the heterogeneity of comorbid psychiatric disorders, a broad review of recent studies was performed. These findings were summarized in a developmental psychopathological model, documenting relevant facts on a timeline.

RESULTS: Based on a genetic disposition and a neuropsychological deregulation, there is evidence for factors which persist across the lifespan, change age-dependently, or show validity in a specific developmental phase. Qualitative changes can be found for children in preschool-age and adults.

CONCLUSION: These differences have implications for clinical practice as they can be used for prevention, diagnostic proceedings, and therapeutic intervention as well as for planning future studies. The present article is a translated and modified version of the German article "Entwicklungspsychopathologie der ADHS", published in Zeitschrift fur Psychiatrie, Psychologie und Psychotherapie, 56, 2008, S. 265-274

Braz J Med Biol Res. 2009;42:465-69.

Anxiety and depression in parents of a Brazilian non-clinical sample of attention-deficit/hyperactivity disorder (ADHD) students.

Segenreich D, Fortes D, Coutinho GC, et al.

Higher prevalence rates of anxiety and depression have been reported in parents of children with attention-deficit/hyperactivity disorder (ADHD). The interaction between the burden of ADHD in offspring, a higher prevalence rate of this highly inherited disorder in parents, and comorbidities may explain this finding. Our objective was to investigate levels of ADHD, anxious and depressive symptomatology, and their relationship in parents of ADHD children from a non-clinical sample using a dimensional approach. The sample included 396 students enrolled in all eight grades of a public school who were screened for ADHD using the SNAP IV rating scale. Positive cases were confirmed through a semi-structured interview. Parents of all 26 ADHD students and 31 paired controls were enrolled. A sample of 36 parents of ADHD children (21 mothers, 15

fathers) and 30 parents of control children (18 mothers, 12 fathers) completed the Adult Self Report Scale, State-Trait Anxiety Inventory, and Beck Depression Inventory in order to investigate anxious and depressive symptomatology. Probands' mothers presented a higher level of ADHD symptomatology (with only inattention being a significant cluster). Again, mothers of ADHD children presented higher depressive and anxiety levels; however, these did not correlate with their own ADHD symptomatology. Only trait-anxiety levels were higher in ADHD mothers. Our findings suggest that: 1) anxious and depressive symptoms might be more prevalent in mothers of ADHD students; 2) anxious and depressive symptomatology might be independent of impairment associated with ADHD symptoms; 3) anxious and depressive symptoms are independent of the presence of ADHD.

J Child Psychol Psychiatry Allied Discip. 2009;50:1052-63.

Dopamine and serotonin transporter genotypes moderate sensitivity to maternal expressed emotion: The case of conduct and emotional problems in attention deficit/hyperactivity disorder.

Sonuga-Barke EJS, Oades RD, Psychogiou L, et al.

Background: Mothers' positive emotions expressed about their children with attention deficit/hyperactivity disorder (ADHD) are associated with a reduced likelihood of comorbid conduct problems (CP). We examined whether this association with CP, and one with emotional problems (EMO), is moderated by variants within three genes, previously reported to be associated with ADHD and to moderate the impact of environmental risks on conduct and/or emotional problems; the dopamine transporter gene (SLC6A3/DAT1), the dopamine D4 receptor gene (DRD4) and the serotonin transporter gene (SLC6A4/5HTT).

Methods: Seven hundred and twenty-eight males between the ages of 5 and 17 with a DSM-IV research diagnosis of combined type ADHD were included in these analyses. Parents and teachers rated children's conduct and emotional problems. Positive maternal expressed emotion (PMEE) was coded by independent observers on comments made during a clinical assessment with the mother based on current or recent medication-free periods.

Results: Sensitivity to the effects of PMEE on CP was moderated by variants of the DAT1 and 5HTT genes. Only children who did not carry the DAT1 10R/10R or the 5HTT l/l genotypes showed altered levels of CP when exposed to PMEE. The effect was most marked where the child with ADHD had both these genotypes. For EMO, sensitivity to PMEE was found only with those who carried the DAT1 9R/9R. There was no effect of DRD4 on CP or EMO.

Conclusion: The gene-environment interactions observed suggested that genetic make-up can alter the degree of sensitivity an ADHD patients has to their family environment. Further research should focus on distinguishing general sensitivity genotypes from those conferring risk or protective qualities.

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J Abnorm Child Psychol. 2009;37:805-16.

Stimulant treatment reduces lapses in attention among children with ADHD: The effects of methylphenidate on intra-individual response time distributions.

Spencer SV, Hawk J, Richards JB, et al.

Recent research has suggested that intra-individual variability in reaction time (RT) distributions of children with ADHD is characterized by a particularly large rightward skew that may reflect lapses in attention. The purpose of the study was to provide the first randomized, placebo-controlled test of the effects of the stimulant methylphenidate (MPH) on this tail and other RT distribution characteristics. Participants were 49 9- to 12-year-old children with ADHD. Children participated in a 3-day double-blind, placebo-controlled medication assessment during which they received long-acting MPH (Concerta(registered trademark)), with the nearest equivalents of 0.3 and 0.6 mg/kg t.i.d. immediate-release MPH. Children completed a simple two-choice speeded discrimination task on and off of medication. Mode RT and deviation from the mode were used to examine the peak and skew, respectively, of RT distributions. MPH significantly reduced the peak and skew of RT distributions. Importantly, the two medication effects were uncorrelated suggesting that MPH works to improve both the speed and variability in responding. The improvement in variability with stimulant treatment is interpreted as a reduction in lapses in attention. This, in turn, may reflect stimulant enhancement of self-regulatory processes theorized to be at the core of ADHD.

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Longitudinal outcome of youth oppositionality: Irritable, headstrong, and hurtful behaviors have distinctive predictions.

Stringaris A, Goodman R.

OBJECTIVE: Oppositional behavior in youths is one of the strongest predictors of a wide range of psychiatric disorders. We test the hypothesis that oppositionality encompasses an Irritable, a Headstrong, and a Hurtful dimension, each with distinct predictions.

METHOD: Longitudinal design combining data from two British national surveys and their respective 3-year follow-ups (N = 7,912). The Developmental and Well-Being Assessment was used to generate DSM-IV diagnoses.

RESULTS: The Irritable dimension was the sole predictor of emotional disorders at follow-up and was particularly associated with distress disorders (depression and anxiety) rather than fear disorders (phobias, separation anxiety, and panic disorder), both before and after adjustment for baseline psychopathology. The Headstrong dimension was the only predictor of attention-deficit/hyperactivity disorder at follow-up. Both Headstrong and Hurtful predicted conduct disorder, although only the Headstrong dimension did so after adjustment for baseline psychopathology. The Hurtful dimension was the strongest predictor of aggressive conduct disorder symptoms.

CONCLUSIONS: Our data suggest a developmental model of mental disorder whereby oppositionality is an interim shared manifestation of different dimensions of psychopathology with distinct outcomes.

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J Child Adolesc Psychopharmacol. 2009;19:319-20.

Atomoxetine hydrochloride-associated transient psychosis in an adolescent with attention-deficit/hyperactivity disorder and mild mental retardation .

Tang CS, Chou WJ, Cheng ATA.

J Am Acad Child Adolesc Psychiatry. 2009;48:740-48.

Second opinions improve adhd prescribing in a medicaid-insured community population.

Thompson JN, Varley CK, McClellan J, et al.

OBJECTIVE: The appropriate use of psychotropic medications in youths is an important public health concern. In this article, we describe a review process developed to monitor the use of stimulants and atomoxetine for attention-deficit/hyperactivity syndrome (ADHD) in youths receiving fee-for-service Medicaid services.

METHOD: Washington State Medicaid developed threshold safety parameters for ADHD medications through a process involving the community. A second opinion was mandated when safety thresholds based on dose, combination therapies, or age was exceeded. Use and cost were compared 2 years before and after the program began.

RESULTS: From May 2006 to April 2008, 5.35% of ADHD prescriptions exceeded safety thresholds, resulting in 1,046 second-opinion reviews. Of those, 538 (51.4%) resulted in a prescription adjustment. Adjustments were made to primary care physician (52%), psychiatrist (50%), nurse practitioner (54%), and physician assistant-written (51%) prescriptions. When the preperiod and postperiod were compared, second opinions reduced ADHD medication at high doses (53%), in combinations (44%), and for patients 5 years of age and younger (23%). The review process resulted in a savings of \$1.2 million, with 538 fewer patients exceeding safety thresholds. This was a 10:1 return over administrative costs; however, the overall Medicaid expenditures for ADHD medication still increased because of higher unit costs and the preferential use by clinicians of newer brands entering the market.

CONCLUSIONS: A statewide second-opinion process reduced outlier ADHD medication prescription practices and was cost-effective. Suggestions for process and quality improvements in prescribing to children diagnosed with ADHD are discussed.

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Eur Child Adolesc Psychiatry. 2009;18:543-53.

Differences in hypothalamic-pituitary-adrenal axis functioning among children with ADHD predominantly inattentive and combined types.

Van West D, Claes S, Deboutte D.

Some evidence suggests that the HPA axis may be dysfunctional in children with attention-deficit/hyperactivity disorder (ADHD). The aim of this study was to investigate whether a different pattern of HPA axis activity is found between the inattentive (I) and combined (C) subtypes of ADHD, in comparison with healthy control children. A total of 100 prepubertal subjects [52 children with ADHD combined type (ADHD-C), 23 children with ADHD predominantly inattentive type (ADHD-I), and 25 healthy control subjects] were studied. The effects of stress were studied by comparing cortisol responses to a psychosocial stressor, consisting of a public speaking task. Children with ADHD-I showed an elevated cortisol response to the psychosocial stressor, in contrast to children with ADHD-C who showed a blunted cortisol response to the psychosocial stressor. When a distinction was made between responders and non-responders (a subject was classified as a responder when there was an increase in cortisol reactivity), hyperactivity symptoms were clearly related to a lower cortisol reactivity to stress. The results indicate that a low-cortisol responsiveness to stress may be a neurobiological marker for children with ADHD-C, but not for those with ADHD-I. Directions for future research and clinical implications are discussed.

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Simple identification of complex ADHD subtypes using current symptom counts.

Volk HE, Todorov AA, Hay DA, et al.

OBJECTIVE: New attention-deficit/hyperactivity disorder (ADHD) subtypes identified through latent class analysis have been recently proposed. Here, we assess the accuracy of simple rules based on symptom counts for the assignment of youths to clinically relevant population-derived ADHD subtypes: severe inattentive (SI) and severe combined (SC).

METHOD: Data from 9,675 twins and siblings from Missouri and Australia aged 7 to 19 years were analyzed using continuous and categorical models of ADHD symptoms using principal components analysis and subtyping by DSM-IV and by latent class criteria. Cut points were derived for classifying SI and SC subtypes by positive predictive value, negative predictive value, percent positive agreement, and Matthew coefficient of agreement.

RESULTS: Principal components analysis suggested two underlying factors: total number of symptoms and symptom type, with SI and SC latent class subtypes clearly mapping to distinct areas on a plot of these factors. Having six or more total symptoms and fewer than three hyperactive-impulsive symptoms accurately predicts the latent class SI subtype. The latent class SC subtype was best identified by 11 or more total symptoms and 4 or more hyperactive-impulsive. The DSM-IV ADHD subtype criteria accurately identified the SC subtype but only poorly for the SI subtype.

CONCLUSIONS: Symptom counts criteria allow the simple and accurate identification of subjects with severe ADHD subtypes defined by latent class analysis. Such simple symptom counts corresponding to screening cut points selected latent class-derived SI subtype subjects with greater precision than DSM-IV criteria.

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J Dev Behav Pediatr. 2009;30:217-25.

The limited effects of obstetrical and neonatal complications on conduct and attention-deficit hyperactivity disorder symptoms in middle childhood.

Wagner AI, Schmidt NL, Lemery-Chalfant K, et al.

Objective: The purpose of this study was to examine the effects of a wide range of obstetrical and neonatal complications as well as socioeconomic variables on the behaviors characterized by attention-deficit hyperactivity disorder, conduct disorder, and oppositional defiant disorder.

Method: Data were collected on 7-to 8-year old twins, using multiple instruments assessing many areas of individual and family functioning. The influence of several aspects of prenatal care, labor and delivery, and early life were considered as well as indicators of socioeconomic status, such as family income and maternal education.

Results: The observed associations were stronger for attention-deficit hyperactivity disorder than conduct disorder symptoms and stronger for females than males. Family income and gender significantly predicted both behavioral outcomes, whereas birth weight predicted attention-deficit hyperactivity disorder symptoms only. However, the presence of attention-deficit hyperactivity disorder and conduct symptom behaviors were not associated with an occurrence of more obstetrical or neonatal complications as indicated by hierarchical linear modeling analyses.

Conclusions: By school age, behavioral problems related to inattention, impulsivity, hyperactivity, defiance, and conduct are relatively unaffected by general adversity in the neonatal and perinatal periods.

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Pediatr Prax. 2009;73:593-606.

Children with suspected disturbances of attention. Diagnostics and interventions - A German multi-centre study.

Weyhreter H, Braun J, Holl RW, et al.

Many patients with symptoms of impaired concentration, patience and attention are seen in centres of social pediatrics (SPZ) in Germany to check for AD(H)S. Despite many studies on efficacy of specific therapies, evidence on effectiveness of community care is missing. Self constructed questionnaires were used to record diagnostic and therapeutic procedures before consulting a SPZ, to describe the process of clinical diagnosis, to document the final diagnosis according to DSM IV or ICD 10, and to determine the proposed interventions. Standardized tests were used to record intelligence, concentration, behaviour, emotional state and quality of life. Medical history and condition were described by a risk-index. 179 patients and their families were included in the study (age 9.2 (plus or minus) 1.4 years, 79% boys). 128 patients had received at least one kind of treatment before consulting a SPZ. According to parents a differentiated medical or psychometric diagnostic procedure prior to treatment had been performed only in 18 (14%) and 21 (16%) patients respectively. According to parents, quality of life in patients already having been treated before attending a SPZ was significantly worse than that of untreated children ($p = 0.02$). The diagnosis of AD(H)S was confirmed in 96 patients (53.9%). Comorbidities were specific developmental disorders of scholastic skills ($n = 42$) and emotional disorders ($n = 33$). 18 children without AD(H)S and no ICD 10 or DSM IV diagnosis showed no specific anomaly in comparison to the other diagnostic groups. In 63 children without AD(H)S mainly specific developmental disorders of scholastic skills or emotional disorders were diagnosed. Comparing with the other groups mean IQ of these patients was lower. According to parents and self rating, quality of life of the study group was lower than that of a healthy reference group (KINDL total score parents: 65.9 (plus or minus) 1.9 vs. 69.7 (plus or minus) 13.4 vs. 73.1 (plus or minus) 7.6; $p < 0.05$). Medical treatment was the main therapeutic recommendation in those patients with AD(H)S ($n = 48$). In these patients significantly increased disturbances of attention ($p = 0.00001$), social integration ($p = 0.01$), emotional feeling ($p = 0.02$) and activity ($p = 0.02$) were found by the examiners. Various problems and etiologies are seen in children being reported by their parents with disturbances of attention and concentration. The diagnosis of AD(H)S is by no means conclusive in all of them. A differentiated medical and psychosocial diagnostic work-up (multimodal diagnostics) is an essential prerequisite for an adequate treatment in the individual child.

CNS Drugs. 2009;23:21-31.

Efficacy and safety limitations of attention-deficit hyperactivity disorder pharmacotherapy in children and adults.

Wigal SB.

There have been major advances in the treatment and understanding of attention-deficit hyperactivity disorder (ADHD) in the last decade. Among these are the availability of newer stimulant formulations, an appreciation of the combined effects of medication and behavioural therapies, and a better understanding of the neurobiology of the disorder in children (aged 6-12 years), adolescents and adults. This article focuses on the evaluation of the efficacy and safety profiles of medications used for the management of ADHD. In assessing the various medical treatments for ADHD, certain issues and analyses have become important to address. The diagnosis, characterization and quantification of ADHD symptoms are crucial to assessing treatment effectiveness. A standardized setting for measuring the severity of ADHD symptoms is the laboratory school protocol, which simulates a school environment with tightly controlled timing of measurements. This method has been adapted successfully to the adult workplace environment to help with

the evaluation of adult ADHD symptoms. Statistical analyses, such as effect size and number needed to treat, may aid in the comparison and interpretation of ADHD study results. Although an objective approach to evaluating the efficacy and safety profiles of the available medications provides necessary details about the medical options, typical clinical decisions are often based on trial and error and may be individualized based on a patient's daily routine, comorbidities and risk factors. Stimulants remain the US FDA-approved medical treatment of choice for patients with ADHD and are associated with an exceptional response rate. Findings of the Multimodal Treatment of Children With ADHD study suggest that the combination of behavioural and medical therapy may benefit most patients. Nonstimulant agents, such as atomoxetine (FDA-approved), and several non-approved agents, bupropion, guanfacine and clonidine, may offer necessary alternatives to the stimulants. This is especially important for patients who have comorbidities that are contraindicated for stimulant use based on medical issues and/or risk for stimulant abuse. Typical psychiatric comorbidities in patients with ADHD include oppositional defiant disorder, conduct disorder, major depressive disorder, bipolar disorder, anxiety, substance abuse disorder, tic disorder, and Tourette syndrome. Although relatively safe, both stimulants and atomoxetine have class-related warnings and contraindications and are associated with adverse effects that require consideration when prescribing. Polypharmacy is a common psychiatric approach to address multiple symptoms or emergent adverse effects of necessary treatments. Future research may provide an improved understanding of polypharmacy and better characterization of the factors that influence the diagnosis and successful treatment of patients with ADHD.

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Adolescence. 2009;44:273-88.

Teachers' preferences for interventions for ethnically diverse learners with attention-deficit hyperactivity disorder.

Wood JC, Heiskell KD, Delay DM, et al.

One hundred sixty-eight elementary and middle school teachers participated in this investigation on the impact of student gender and ethnicity on teacher recommendations for interventions for attention-deficit hyperactivity disorder (ADHD). Participants read a scenario describing a student with ADHD accompanied by a student photo which depicted his/her ethnicity and gender. Participants were then asked how strongly they would recommend four common interventions. Findings suggest teachers are more likely to recommend interventions requiring less parental involvement for minority students than for Caucasian students. Elementary and special education teachers were more likely to recommend interventions with greater empirical support than were middle school and regular education teachers. Ramifications for intervention selection in schools and suggestions for future investigations are reviewed.

Aust New Zealand J Psychiatry. 2009;43:731-38.

Quality of life in parents of children with attention-deficit-hyperactivity disorder in Hong Kong.

Xiang YT, Luk E, Lai K.

Objective: There is no study on the quality of life (QOL) of parents of children with attention-deficit-hyperactivity disorder (ADHD), although QOL is increasingly gaining more attention and the interactions between children and their parents are bi-directional. The aim of the present study was therefore to survey the QOL of parents of children with ADHD in Hong Kong, and explore the relationships of sociodemographic and clinical variables with QOL.

Method: Seventy-seven parents of children with ADHD were consecutively selected and the sociodemographic and clinical characteristics of the parents and their children were assessed.

Results: Compared with the general population in Hong Kong, significantly lower scores in physical, psychological, social and environmental QOL domains were found in the parents of children with ADHD. On multivariate analysis, for the children with ADHD, the severity of emotional and hyperactivity/inattention symptoms, and having a comorbid pervasive developmental disorder were significantly correlated with one or more domains of QOL; while for the parents, educational level, household monthly income and having major medical conditions were significantly correlated with one or more domains of QOL.

Conclusions: Parents of children with ADHD have low QOL and research is needed to understand the underlying problems.

Psychiatrie. 2009;13:112-13.

Correlates of clinical, psychological and genetic markers and their developmental trends in boys with attention-deficit/hyperactivity disorder - Longitudinal study.

Zackova M, Fil'ova A, Klimusova H, et al.

This article shows results of an interdisciplinary study following a completed study that evaluated clinical and genetic markers and their correlates in boys with attention-deficit/hyperactivity disorder (ADHD) at the age of 7 to 13 years. The aim of this article has been to assess the developmental trends of the psychological characteristics and their correlates with genetic factors in a group of these patients at the age of 13 to 18 years.

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<http://crc.marionegri.it/bonati/adhdnews/subscribe.html>

Iniziativa nell'ambito del Progetto di ricerca indipendente AIFA

“Sicurezza a lungo termine dei farmaci utilizzati nel trattamento di bambini in età scolare con sindrome da deficit di attenzione e iperattività ed epidemiologia della malattia nella popolazione italiana”.

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