NEWSLETTER

Attention Deficit Hyperactivity Disorder

INDICE:

N. 40 anno IV – febbraio 2011

MARIO NEGRI
ISTITUTO DI RICERCHE FARMACOLOGICHE
1961 - 2011

BIBIOGRAFIA ADHD FEBBRAIO 2011

Acta Neuropsychol. 2008;6:337-48.

PERCEPTION OF FACIALLY AND VOCALLY EXPRESSED EMOTIONS IN CHILDREN WITH ADHD.

Czaplewska E, Lipowska M.

Attention Deficit Hyperactivity Disorder is a diagnosis applied to children and adults who show serious cognitive problems and behavioral disturbances in essential aspects of their life. These problems can be divided into three characteristic syndromes: impulsive, hyperactive and inattentive. One of the characteristics of behavior of children with ADHD is oversensitivity, associated with inappropriate reaction to emotional situations, resulting from two different sources: incorrect interpretation of the emotions of others, and high emotional liability. Perception of the emotional aspect of the message strongly determines the interpretation of the sender's intention towards the receiver and the sense of the interaction. In our research we wanted to determine whether pupils with hyperactivity differ from their peers in their perception of facially and vocally expressed emotions.There were 60 participants of the research - 30 pupils with ADHD aged 8- 9 and control group.The obtained data show the existence of essential differences in the level of correct perception of mimic emotion signals between hyperactive children and control group. The responses from children with ADHD were less precise, especially when concerning the mimics. The most correctly perceived were facial and vocal signals of joy and sorrow, although the children with ADHD had the smallest problem with the recognition of positive emotions.This should be taken into consideration when planning the therapy - rewards, emotions and positive reinforcement seem to be better received by hyperactive children and can function as directions regulating behavior better than penalties.

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Acta Neuropsychol. 2008;6:369-79.

LANGUAGE SKILLS IN CHILDREN WITH ADHD AND DEVELOPMENTAL DYSLEXIA.

Lipowska M, Bogdanowicz M, Bulinski L.

Background. Attention-Deficit Hyperactivity Disorder (ADHD) and specific learning difficulties (dyslexia) belong to the most frequently diagnosed developmental disorders in school-age children, and not infrequently cooccur. Linguistic functioning is one of the aspects of cognitive functioning in the cases of ADHA, dyslexia, or both disorders that presents a very diverse symptomatology. The aim of our interdisciplinary research, conducted on 259 children, was to determine whether or not children diagnosed with ADHD and developmental dyslexia differ in the level of linguistic functioning from their peers who are only hyperactive or have isolated developmental dyslexia.

Material and methods. The experimental group consisted of 62 children diagnosed with both ADHD and dyslexia. This group was compared with two other clinical groups: children with ADHD and children with dyslexia, and to a control group of pupils without any diagnosed deficits, matched to the experimental group in terms of age. We used the Controlled Oral Word Association Test (COWAT), the Phonological-Semantic Interference Test, and the Token Test - 36, in order to analyze cognitive functioning.
Results. Our results indicated that children from all three clinical groups showed a lower level of linguistic competence than the control group. ADHD children had the most difficulties with tasks measuring verbal fluency and comprehension of complex linguistic utterances. The dyslexic group had difficulties mainly with the phonological aspect of language. In the case of cooccurrence of both disorders, cognitive functions deficits are deeper, which must affect school performance.

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Acta Neuropsychol. 2008;6:380-89.
DEPRESSIVE SYMPTOMATOLOGY IN YOUNG PATIENTS WITH ADHD IN OUTPATIENT CARE.
Sumila A, Cieslukowska AM.
Background. Attention-Deficit Hyperactivity Disorder (ADHD) is frequently associated with other neuropsychiatric childhood disorders. Therefore, the assessment of young patients can be complicated by several factors, including the differential diagnosis of comorbid psychiatric conditions, as well as inconsistencies in the manifestation of ADHD symptomatology. The symptoms of comorbid depression presented by patients primarily diagnosed with ADHD are often unrecognized and/or untreated. For that reason, greater attention should be devoted to the complex interplay between ADHD and associated disorders. The main goal of the discussed study was to analyze the symptomatology presented by the individuals diagnosed with ADHD, in the course of the first psychiatric consultation, as well as overall psychiatric comorbidities.
Material and methods. 62 subjects, ages 5 to 19 (mean 12.57) participated in this retrospective study. These individuals were referred for the first psy chiatric assessment at the Psychological and Pedagogical Center because of attention deficits, learning difficulties, hyperactivity, aggressive behaviours, talkativeness, interpersonal difficulties, forgetfulness or impatience. The data were gathered in 2007.
Results. In the presented sample, the clinical picture of depression was observed in almost 1/3 of the individuals ages 13 to 15. Irritability, persistent sadness, mood fluctuations as well as low self esteem/feelings of worthlessness were among most frequently reported symptoms. The explanations for the comorbidities, as well as their implications for clinical practice, are discussed. Overall, greater attention should be paid to interactions between ADHD and associated psychiatric comorbidities.

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Acta Neuropsychol. 2008;6:360-68.
LANGUAGE DEFICITS IN BOYS WITH ADHD.
Skotnicka M.
ADHD (Attention deficit hyperactivity disorder) is a common neurodevelopmental disorder. Children with ADHD have many cognitive and behavioral problems, associated with poor inhibition mechanisms, impulsivity, ineffective attention processes, and poor motor control. The aim of this study was to assess language deficits in a group of 60 boys with ADHD, compared to 30 healthy controls. The results suggest mild or moderate language problems, consisting in failed word choice and selection, lack of inhibition of inadequate memories, and increased susceptibility to interference, related to ADHD.

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Acta Neuropsychol. 2008;6:311-24.

EXTERNALIZING AND INTERNALIZING PSYCHOPATHOLOGY IN CHILDREN WITH ADHD COMBINED TYPE VERSUS ADHD INATTENTION TYPE.

Borkowska AR.

Background. ADHD is characterized by inattention, impulsiveness and hyperactivity, but the clinical picture of ADHD seems to be broader than these behaviors. A high rate of overlap between ADHD and psychiatric disorders, other developmental disorders (developmental dyslexia, dyscalculia, language impairments) oppositional defiant disorder and conduct disorder has been found in previous research. The aim of the present study was to compare the amount and intensity of symptoms of psychopathology in ADHD combined type and ADHD inattention type children.

Material and methods. The research involved 132 children aged 9-11, with and without ADHD. All the children in the ADHD group met the DSM-IV- TR criteria for that disorder: 64 ADHD combined subtype and 21 ADHD inattentive subtype. The control group consisted of 47 children without impairments. The CBCL and TRF questionnaires were used to obtain information from relatives and teachers (TRF) regarding the children's competencies and behavioral/emotional problems.

Results. CBCL and TRF profiles differed only in the intensity of assessed symptoms, not in the pattern of the profile, so parents and teachers perceive the children in a similar way. Significant differences between ADHD combined type and the control group were seen on all scales except Withdrawn (CBCL) and Somatic Complaints (TRF). The ADHD combined group showed higher scores than ADHD inattention type on Anxious/Depressed, Attention Problems, Aggressive Behaviors, Externalizing Scale and Total score. Significant differences between ADHD inattention type and the control group were seen in Social Problems, Attentive Problems, Delinquent Behaviors, Aggressive Behaviors, Externalizing Scale and Total score.

Conclusions. ADHD was found to be more related to externalizing than internalizing psychopathology.

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Acta Paediatr Int J Paediatr. 2011;100:402-06.

ACADEMIC PERFORMANCE OF ADOLESCENTS WITH ADHD AND OTHER BEHAVIOURAL AND LEARNING PROBLEMS - A POPULATION-BASED LONGITUDINAL STUDY.

Ek U, Westerlund J, Holmberg K, et al.

Aim: To study academic performance (final grades at the age of 16 years) in individuals with i) attention-deficit/hyperactivity disorder (ADHD) and ii) other learning and/or behavioural problems. Methods: Of a total population of 591 children, originally assessed at the age of 10-11 years, it was possible to obtain final grades for 536 16-year-olds (in grade 9). Those fulfilling the criteria for ADHD/sub-threshold ADHD (n = 39) and those with 'Behaviour and Learning Problems' (BLP group), (n = 80) and a comparison group (n = 417) were contrasted. Results: The ADHD and BLP groups had a significantly lower total mean grade at the age of 16 years than the comparison group. In addition, the ADHD and BLP groups also qualified for further studies in the upper secondary school to a significantly lesser extent than the controls (72%, 68% and 92%, respectively). All IQ measures (at the age of 10-11 years) were positively correlated with the overall grade after grade 9, with especially strong correlations for verbal capacity. Conclusion: ADHD and similar problems entail a risk of underachievement at school. The results indicate that pupils with ADHD underachieve in the school situation in relation to their optimal cognitive capacity. The contextual situation and the particular requirements should be considered in order for adequate educational measures to be undertaken.

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Aggressive Behavior. 2011 Jan;37:63-72.

The neurocognition of conduct disorder behaviors: Specificity to physical aggression and theft after controlling for ADHD symptoms.

Barker ED, Tremblay RE, van Lier PAC, et al.
There is growing evidence that among the different conduct disorder (CD) behaviors, physical aggression, but not theft, links to low neurocognitive abilities. Specifically, physical aggression has consistently been found to be negatively related to neurocognitive abilities, whereas theft has been shown to be either positively or not related to neurocognition. The specificity of these links needs further examination because attention deficit hyperactivity disorder (ADHD) links to both physical aggression and neurocognitive variation. The development of self-reported physical aggression and theft, from age 11 to 17 years, was studied in a prospective at-risk male cohort via a dual process latent growth curve model. Seven neurocognitive tests at age 20 were regressed on the growth parameters of physical aggression and theft. The links between neurocognition and the growth parameters of physical aggression and theft were adjusted for ADHD symptoms at ages 11 and 15 (parent, child and teacher reports). Results indicated that verbal abilities were negatively related to physical aggression while they were positively associated with theft. However, inductive reasoning was negatively associated with increases in theft across adolescence. Symptoms of ADHD accounted for part of the neurocognitive test links with physical aggression but did not account for the associations with theft. These differences emphasize the importance of examining specific CD behaviors to better understand their neurodevelopmental mechanisms. They also suggest that youth who engage in different levels of physical aggression or theft behaviors may require different preventive and corrective interventions.

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Behav Genet. 2011 Jan;41:165-74.
A FAMILY BASED ASSOCIATION STUDY OF DRD4, DAT1, AND 5HTT AND CONTINUOUS TRAITS OF ATTENTION-DEFICIT HYPERACTIVITY DISORDER.
Bidwell LC, Willcutt EG, McQueen MB, et al.
Despite its high heritability, genetic association studies of attention deficit-hyperactivity disorder (ADHD) have often resulted in somewhat small, inconsistent effects. Refining the ADHD phenotype beyond a dichotomous diagnosis and testing associations with continuous information from the underlying symptom dimensions may result in more consistent genetic findings. This study further examined the association between ADHD and the DRD4, DAT1, and 5HTT genes by testing their association with multivariate phenotypes derived from continuous measures of ADHD symptom severity. DNA was collected in 202 families consisting of at least one ADHD proband and at least one parent or sibling. VNTR polymorphisms of the DRD4 and DAT1 genes were significantly associated with the continuous ADHD phenotype. The association with DRD4 was driven by both inattentive and hyperactive symptoms, while the association with DAT1 was driven primarily by inattentive symptoms. These results use novel methods to build upon important connections between dopamine genes and their final behavioral manifestation as symptoms of ADHD.

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BMC Pediatr. 2010;10.
STUDY PROTOCOL: THE SLEEPING SOUND WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER PROJECT.
Sciberras E, Efron D, Gerner B, et al.
Background: Up to 70% of children with Attention-Deficit/Hyperactivity Disorder (ADHD) experience sleep problems including difficulties initiating and maintaining sleep. Sleep problems in children with ADHD can result in poorer child functioning, impacting on school attendance, daily functioning and behaviour, as well as parental mental health and work attendance. The Sleeping Sound with ADHD trial aims to investigate the efficacy of a behavioural sleep program in treating sleep problems experienced by children with ADHD. We have demonstrated the feasibility and the acceptability of this treatment program in a pilot study.
Methods/Design: This randomised controlled trial (RCT) is being conducted with 198 children (aged between 5 to 12 years) with ADHD and moderate to severe sleep problems. Children are recruited from

public and private paediatric practices across the state of Victoria, Australia. Upon receiving informed written consent, families are randomised to receive either the behavioural sleep intervention or usual care. The intervention consists of two individual, face-to-face consultations and a follow-up phone call with a trained clinician (trainee consultant paediatrician or psychologist), focusing on the assessment and management of child sleep problems. The primary outcome is parent- and teacher-reported ADHD symptoms (ADHD Rating Scale IV). Secondary outcomes are child sleep (actigraphy and parent report), behaviour, daily functioning, school attendance and working memory, as well as parent mental health and work attendance. We are also assessing the impact of children's psychiatric comorbidity (measured using a structured diagnostic interview) on treatment outcome.
Discussion: To our knowledge, this is the first RCT of a behavioural intervention aiming to treat sleep problems in children with ADHD. If effective, this program will provide a feasible non-pharmacological and acceptable intervention improving child sleep and ADHD symptoms in this patient group.
Trial Registration: Current Controlled Trials ISRCTN68819261. ISRCTN: ISRCTN68819261.

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BMC Psychiatry. 2011;11.

MEDIO-FRONTAL AND ANTERIOR TEMPORAL ABNORMALITIES IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) DURING AN ACOUSTIC ANTISACCADE TASK AS REVEALED BY ELECTRO-CORTICAL SOURCE RECONSTRUCTION.

Goepel J, Kissler J, Rockstroh B, et al.

Background: Attention Deficit Hyperactivity Disorder (ADHD) is one of the most prevalent disorders in children and adolescence. Impulsivity is one of three core symptoms and likely associated with inhibition difficulties. To date the neural correlate of the antisaccade task, a test of response inhibition, has not been studied in children with (or without) ADHD.
Methods: Antisaccade responses to visual and acoustic cues were examined in nine unmedicated boys with ADHD (mean age 122.44 (plus or minus) 20.81 months) and 14 healthy control children (mean age 115.64 (plus or minus) 22.87 months, three girls) while an electroencephalogram (EEG) was recorded. Brain activity before saccade onset was reconstructed using a 23-source-montage.
Results: When cues were acoustic, children with ADHD had a higher source activity than control children in Medio-Frontal Cortex (MFC) between -230 and -120 ms and in the left-hemispheric Temporal Anterior Cortex (TAC) between -112 and 0 ms before saccade onset, despite both groups performing similarly behaviourally (antisaccades errors and saccade latency). When visual cues were used EEG-activity preceding antisaccades did not differ between groups.
Conclusion: Children with ADHD exhibit altered functioning of the TAC and MFC during an antisaccade task elicited by acoustic cues. Children with ADHD need more source activation to reach the same behavioural level as control children.

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Brain Dev. 2011;33:260-67.

SUMMER TREATMENT PROGRAM FOR CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER: JAPANESE EXPERIENCE IN 5 YEARS.

Yamashita Y, Mukasa A, Anai C, et al.

In 2005 we established the first American-style summer treatment program (STP) for children with attention deficit hyperactivity disorder (ADHD) located outside North America. This program was based on methods established by professor Pelham and has been used in a number of studies and at a number of sites in the USA. A total of 137 children diagnosed with ADHD, ranging in age from 6 to 12years, participated in at least one of five annual summer treatment programs in Kurume city, Japan, during 2005-2009. The duration of the STP was 2weeks in 2005, 2008, and 2009; 3weeks in 2006 and 2007. A set of evidence-based behavioral modification techniques comprising the STP behavioral program (e.g., point system, daily

report card, positive reinforcement, time out) was used. We also assessed the cognitive function of individual children before and after STP using the CogStateR batteries. Every year, regardless of the duration of the STP, most children showed positive behavioral changes in multiple domains of functioning, demonstrated by significant improvement in points earned daily, which reflect behavior frequencies. Cognitive functions, particularly the rate of anticipatory errors in executive function, significantly improved after the STP, suggesting that STP has positive effects not only on behavioral aspects but also on some cognitive functions. Further studies are necessary to confirm this finding by studying sequential cognitive function of age-matched children who do not attend STP.

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Brain Res. 2011 Jan;1368:159-62.

THE FUNCTION OF HYPOTHALAMUS–PITUITARY–ADRENAL AXIS IN CHILDREN WITH ADHD.

Ma L, Chen YH, Chen H, et al.

Objective: To explore the relationship between hypothalamus–pituitary–adrenal (HPA) axis and Attention Deficit Hyperactivity Disorder (ADHD) in non-stress states.

Method: 128 male children with ADHD aged between 6 and 14 years old were recruited, while 30 healthy male children were chosen as a control group. The diagnostic material was based on DSM-IV. The included ADHD children were further classified into the three sub-groups: ADHD-predominantly inattention type (ADHD-I) (n = 44), ADHD-predominantly hyperactive impulsive type (ADHD-HI) (n = 32), and ADHD-combined type (ADHD-C) (n = 52). The levels of cortisol and adrenocorticotropin hormone (ACTH) were evaluated by the automatic particle enzyme immunoassay and electrochemiluminescence respectively per morning (8:00 am). Intelligence test was assessed by the Raven's Standard Progressive Matrices.

Results: The children with ADHD had significantly lower intelligence quotient (IQ) (84.5 ± 11.3) in contrast to the control group (98.6 ± 12.4, $P < 0.01$), although the lower level of IQ in ADHD-C group (79.2 ± 10.7) was also found when compared with other two sub-groups [ADHD-I (85.6 ± 10.4) and ADHD-HI (91.3 ± 12.6)]. In addition, no significant difference between the ADHD-HI group and the control group regarding the level of IQ were revealed. The level of cortisol in the ADHD group (226.47 ± 129.12 nmol/L) was significantly lower than that of the control group (384.53 ± 141.43 nmol/L, $P < 0.001$). The level of cortisol of the ADHD-HI group (154.36 ± 71.62 nmol/L) was significantly lower than that of other two groups [ADHD-I group (219.42 ± 117.66 nmol/L) ($P < 0.01$) and ADHD-C group (258.30 ± 136.39 nmol/L) ($P < 0.01$)]. There were no significant differences in the ACTH level either between the ADHD and the control group ($P > 0.05$), or between sub-groups in ADHD ($P > 0.05$).

Conclusion: In the non-stress states, the existence of dysfunction of the HPA axis (lower plasma cortisol) in children with ADHD might be due to the under-reactivity of the HPA axis ; the low plasma cortisol level might contribute less to the outcomes of cognitive behavior of ADHD children and instead more closely relate to the core domains of attention deficit, hyperactivity and impulsive behavior of ADHD patients.

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Child Adolesc Psychiatry Ment Health. 2010;4.

EFFICACY AND TOLERABILITY OF LISDEXAMFETAMINE DIMESYLATE IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: SEX AND AGE EFFECTS AND EFFECT SIZE ACROSS THE DAY.

Wigal SB, Kollins SH, Childress AC, et al.

Background: Efficacy and safety profiles by sex and age (6-9 vs 10-12 years) and magnitude and duration of effect by effect size overall and across the day of lisdexamfetamine dimesylate (LDX) vs placebo were assessed.

Methods: This study enrolled children (6-12 years) with attention-deficit/hyperactivity disorder (ADHD) in an open-label dose optimization with LDX (30-70 mg/d) followed by a randomized, double-blind, placebo-controlled, 2-way crossover phase. Post hoc analyses assessed interaction between sex or age and treatment and assessed effect sizes for Swanson, Kotkin, Agler, M-Flynn, and Pelham (SKAMP) and

Permanent Product Measure of Performance (PERMP) scales and ADHD Rating Scale IV measures. No corrections for multiple testing were applied on time points and subgroup statistical comparisons.
Results: 129 participants enrolled; 117 randomized. Both sexes showed improvement on all assessments at postdose time points; females showed less impairment than males for SKAMP and PERMP scores in treatment and placebo groups at nearly all times. Both age groups improved on all assessments at postdose time points. Children 10-12 years had less impairment in SKAMP ratings than those 6-9 years. Treatment-by-sex interactions were observed at time points for SKAMP-D, SKAMP total, and PERMP scores; no consistent pattern across scales or time points was observed. LDX demonstrated significant improvement vs placebo, by effect size, on SKAMP-D from 1.5-13 hours postdose. The overall LS mean (SE) SKAMP-D effect size was -1.73 (0.18). In the dose-optimization phase, common ((greater-than or equal to)2%) treatment-emergent adverse events (TEAEs) in males were upper abdominal pain, headache, affect lability, initial insomnia, and insomnia; in females were nausea and decreased weight. During the crossover phase for those taking LDX, higher incidence ((greater-than or equal to)2% greater) was observed in males for upper abdominal pain and insomnia and in females for nausea and headache. Overall incidence of TEAEs in age groups was similar.
Conclusion: Apparent differences in impairment level between sex and age groups were noted. However, these results support the efficacy of LDX from 1.5 hours to 13 hours postdose in boys and girls with medium to large effect sizes across the day with some variability in TEAE incidence by sex. Trial Registration Number: ClinicalTrials.gov Identifier: NCT00500149.

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Clin Case Stud. 2011;10:23-36.
THE USE OF HOMEWORK SUCCESS FOR A CHILD WITH ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER, PREDOMINANTLY INATTENTIVE TYPE.
Resnick A, Reitman D.
This case study describes use of the Homework Success Program (HSP) for a child with attention-deficit/hyperactivity disorder (ADHD), predominantly inattentive type. Larry, an 8-year-old boy, presented with homework-related difficulties, including difficulty "focusing" and "sustaining attention," becoming "easily distracted," spending 3 to 4 hr per night on homework, forgetting to bring home books, and inconsistently writing down assignments in his planner. Treatment with the HSP included a seven-session intervention with a 1- and 7-month follow-up, which resulted in parent-reported improvements in Larry's homework performance, homework completion time, and the percentage of homework completed. Parental satisfaction with the program was noted. Results of treatment revealed minimal change in teacher-reported academic performance. Recommendations for successful implementation of the HSP are provided.

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Clin EEG Neurosci. 2011;42:1-5.
GIRLS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: EEG DIFFERENCES BETWEEN DSM-IV TYPES.
Dupuy FE, Clarke AR, Barry RJ, et al.
This study investigated EEG differences between the Combined and Inattentive types of Attention-Deficit/Hyperactivity Disorder (AD/HD) in girls. Thirty girls with AD/HD of the Combined type, 30 girls with the Inattentive type, and 30 controls (aged 8-12 years) had a resting eyes-closed EEG recorded from 21 electrodes. The EEG was Fast Fourier Transformed and estimates for total power, and absolute and relative power in the delta, theta, alpha and beta frequency bands, were analyzed in nine cortical regions. Across the scalp, girls with AD/HD had elevated total power, elevated absolute delta and theta, reduced relative delta and beta, and increased relative theta compared with controls. Compared with the Inattentive group, the Combined group had greater right hemisphere absolute theta and greater midline posterior absolute beta activity. The Combined group also had reduced right hemisphere relative delta, greater left hemisphere relative theta, reduced midline posterior relative alpha and reduced central relative beta

activity. In conclusion, girls with AD/HD had increased slow wave (delta and theta) activity and reduced beta activity, which are robust results in the predominantly-male AD/HD literature, and exhibited the elevated theta/beta abnormality. The lack of global differences between DSM-IV AD/HD types differs from previous studies of boys and mixed-sex groups. The present results highlight the homogeneity of EEG profiles in AD/HD girls, which could be due to sex-bias in the diagnostic criteria. This study is the first to investigate EEG differences between the Inattentive and Combined types of AD/HD with a purely female sample.

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Clin Pediatr. 2011;50:144-52.

ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN PRESCHOOL-AGE CHILDREN: ISSUES AND CONCERNS.

Davis DW, Williams PG.

The diagnosis of attention deficit/hyperactivity disorder (ADHD) in children has been steadily increasing over the past 10 years. ADHD is associated with numerous health, behavioral, social, and academic outcomes. The use of medication is common for the treatment of ADHD. However, the evidence base for pharmacological and non-pharmacological treatments for children younger than 6 years of age is limited. Both short-term and long-term studies of efficacy and safety of all interventions are needed in this population, especially the use of psychotropic medications. Understanding the long-term effects of psychotropic medication on the developing brains of preschoolers has important implications for outcomes into adulthood. Nonpharmacologic evidence-based interventions are available and should serve as the first line of treatment in this population. Future research needs include further evidence regarding specific curricula, dose, duration, delivery methods, and staff training to ensure optimal intervention outcomes.

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Clinical Psychology: Science and Practice. 2010 Dec;17:327-36.

COMORBIDITY OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND EARLY-ONSET CONDUCT DISORDER: BIOLOGICAL, ENVIRONMENTAL, AND DEVELOPMENTAL MECHANISMS.

Beauchaine TP, Hinshaw SP, Pang KL.

Among boys, about one-third who exhibit severe attention- deficit/hyperactivity disorder (ADHD) in preschool follow a developmental trajectory to early-onset conduct disorder (CD) in later childhood and adolescence. Moreover, the vast majority of adolescent boys with early-onset CD also meet criteria for ADHD. Although trait impulsivity, a predisposing vulnerability to both ADHD and CD, is about 80% heritable, environmental risk factors play an important role in how impulsivity is expressed, including whether young children with ADHD eventually develop CD. In this article, we (a) describe how environmental risk potentiates early-onset conduct problems among trait-impulsive and therefore vulnerable individuals and (b) outline implications for conceptualizations of externalizing comorbidity. Although other pathways to CD exist, we focus on what is likely to be a common developmental trajectory to this costly psychiatric condition.

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Dev Med Child Neurol. 2011;53:263-68.

PERINATAL, MATERNAL, AND FETAL CHARACTERISTICS OF CHILDREN DIAGNOSED WITH ATTENTION-DEFICIT-HYPERACTIVITY DISORDER: RESULTS FROM A POPULATION-BASED STUDY UTILIZING THE SWEDISH MEDICAL BIRTH REGISTER.

Gustafsson P, Kallen K.

Aim The aim of this study was to evaluate the impact of pre- and perinatal factors on the risk of developing attention-deficit-hyperactivity disorder (ADHD).

Method We investigated the medical history of 237 children (206 male; 31 female) from Malmo, Sweden born between 1986 and 1996 and in whom a diagnosis of ADHD (Diagnostic and Statistical Manual of Mental Disorders-IIIR or IV) was subsequently made at the Department of Child and Adolescent Psychiatry, Lund University, and a reference group of 31775 typically developing children from Malmo using data from the Swedish Medical Birth Register.
Results The results of multiple logistic regression analysis revealed that ADHD was significantly associated with a young maternal age (odds ratio [OR] for 5y increase 0.87; 95% confidence interval [CI] 0.76-0.99), maternal smoking (OR 1.35; 95% CI 1.14-1.60), maternal birthplace in Sweden (OR 2.04; 95% CI 1.45-2.94), and preterm birth <32weeks (OR 3.05; 95% CI 1.39-6.71), and a male predominance (OR 6.38; 95% CI 4.37-9.32). Apgar scores at 5minutes below 7 were significantly associated with ADHD in the univariable analysis (OR 2.60; 95% CI 1.15-5.90). The population-attributable fraction of ADHD caused by the perinatal factors studied was estimated to be 2.8%.
Interpretation The results indicate that the studied factors constitute weak risk factors for developing ADHD.

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Dev Neuropsychol. 2011 Jan;36:57-73.

ATTENTION PROBLEMS IN A REPRESENTATIVE SAMPLE OF EXTREMELY PRETERM/EXTREMELY LOW BIRTH WEIGHT CHILDREN.

Anderson PJ, De Luca CR, Hutchinson E, et al.

The aim of this study was to examine attention in a large, representative, contemporary cohort of children born extremely preterm (EP) and/or extremely low birth weight (ELBW). Participants included 189 of 201 surviving children born EP (< 28 weeks' gestation) or ELBW (< 1,000 g) in 1997 in the state of Victoria, Australia. A comparison group of 173 of 199 children born full term and normal birth weight (FT/NBW) were randomly selected matching for birth hospital, expected due date, gender, mother's country of birth, and health insurance status. Participants were assessed at 8 years of age on subtests from the Test of Everyday Attention for Children (TEA-Ch) and the Wechsler Intelligence Scale for Children-4th Edition (WISC-IV). Measures of selective attention, sustained attention, attention encoding, and executive attention (inhibition, shifting attention, and divided attention) were administered. To assess behavioral elements of inattention, the primary caregiver completed the Behavior Rating Inventory of Executive Function (BRIEF) and the Conners' ADHD/DSM-IV Scale (CADS-P). The EP/ELBW group performed more poorly across all cognitive and behavioral measures than the FT/NBW group, with the exception of inhibition. The EP/ELBW group also had significantly elevated rates of impairment in selective, sustained, shifting and divided attention, as well as attention deficit hyperactivity disorder (ADHD) symptoms. No significant gender or gradient effects (e.g., < 26 weeks' gestation vs. = 26 weeks' gestation) were identified. Neonatal medical factors were not strong predictors of attention, although necrotizing enterocolitis (NEC) and cystic periventricular leukomalacia (PVL) were independent predictors of selective attention. In conclusion, our comprehensive assessment of attention provides strong evidence that children born EP/ELBW are at increased risk for attentional impairments, and as such, this population should be monitored closely during early and middle childhood with a focus on attention functioning.

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Diagnostica. 2011 Jan;57:2-16.

DIFFERENTIELLER KONZENTRATIONSTEST FÜR KINDER (DKT-K). ENTWICKLUNG UND EMPIRISCHE ÜBERPRÜFUNG EINES COMPUTERGESTÜTZTEN VERFAHRENS ZUR ERFASSUNG DER LÄNGERFRISTIGEN KONZENTRATIONSFÄHIGKEIT.

Funsch K, Martín BA, Halder-Sinn P.

Problems in concentration are a common phenomenon in infants and can appear in different ways. Children with ADHD have difficulties with long-term concentration, whereas they show no noticeable

problems in short-term tasks. Besides the temporal dimension, concentration also includes diverse facets of information perception and processing. In order to examine the diverse aspects of concentration in a differentiated manner, the Differential Concentration Test for Children (DKT-K) was developed. It contains six trials and four scales with different difficulty levels. An initial empirical verification of the DKT-K was conducted with a sample of n = 230 pre- and elementary school children. The results confirm that the DKT-K is a reliable and valid test to record concentration in a differentiated way. By conducting the test with a sample of n = 35 children diagnosed with ADHD, it could also be shown that the DKT-K gathers the central difficulties in concentration for this disorder. These children differ significantly from a control group, parallelized for age and sex.

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Epilepsy Behav. 2011;20:95-102.

TOLERABILITY OF ATOMOXETINE FOR TREATMENT OF PEDIATRIC ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN THE CONTEXT OF EPILEPSY.

Torres A, Whitney J, Rao S, et al.

To examine atomoxetine's tolerability in patients with epilepsy, we reviewed medical records of all patients with epilepsy who were treated with atomoxetine in a tertiary care pediatric psychopharmacology practice. Twenty-seven patients (10.1 (plus or minus) 4.2. years, 63% male) with an average seizure frequency at baseline of 7 (plus or minus) 24 per month (median: 0, range: 0-90) were found. Symptoms of attention-deficit/hyperactivity disorder in twenty-five patients (92.5%) had previously not responded to stimulants. Atomoxetine, average dose 35.2 (plus or minus) 24.4. mg, was given for a median of 26. weeks (range: 4-141). Seventeen patients (63%) discontinued atomoxetine due to: inadequate response (n= 7, 26%), worsening behavior such as increased irritability/activation (n = 7, 26%), nonadherence (n= 1, 4%), emerging psychotic-like symptoms (n= 1, 4%), and appetite decrease and tremor (n= 1, 4%). There were no discontinuations because of seizure exacerbation. Atomoxetine dose, epilepsy etiology, seizure type, and comorbid psychiatric disorders did not predict discontinuation. No safety problems of sufficient magnitude to preclude prospective studies of atomoxetine in children with epilepsy were found.

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Eur Child Adolesc Psychiatry. 2011;20:75-81.

DO THE DIAGNOSTIC CRITERIA FOR ADHD NEED TO CHANGE? COMMENTS ON THE PRELIMINARY PROPOSALS OF THE DSM-5 ADHD AND DISRUPTIVE BEHAVIOR DISORDERS COMMITTEE .

Coghill D, Seth S.

The purpose of this commentary is to discuss the recent proposals for revision of the diagnostic criteria made by the DSM-5 ADHD and Disruptive Behavior Disorders Committee. The major concerns with the current diagnostic criteria for ADHD and hence the main suggestions for change focused on the general structure and organization of subtypes, the number, content and distribution of criteria, the age of onset criteria, the ascertainment of cross-situationality and the inclusion and exclusion criteria. Suggestions for change in these areas have been made in order that these changes can be tested in field trials before being finalised. Whilst several of the proposed revisions are relatively uncontentious e.g., the elaborated symptoms criteria, the identification of ADHD as a disorder of both behavioural and cognitive functioning, the situational and developmental dependence of symptoms, the permission to diagnose ADHD in the presence of an autism spectrum disorder, clarification of the relationship between ADHD and irritable mood and the importance of getting information from teachers and other third parties. Several of the other proposed changed are more contentious and will require extensive field testing to assess their impact on validity, reliability and clinical usefulness. These include changes to the way in which individuals with inattention but no hyperactivity/impulsivity are classified, the addition of four new impulsivity symptoms, a reduction in the number of symptoms required to meet criteria for older adolescents and adults and the raising of the age of onset to 12 years of age.

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Indian J Psychiatry. 2011;53:41-44.

A PRELIMINARY STUDY OF FACTORS AFFECTING ADHERENCE TO MEDICATION IN CLINIC CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Sitholey P, Agarwal V, Chamoli S.

Background: Attention-deficit/hyperactivity disorder (ADHD) is a common and chronic condition requiring long-term management. However, nonadherence to treatment and its reasons have not been studied in Indian children with ADHD.

Objective: To identify the factors affecting adherence to medication in clinic children and adolescents with ADHD. Methods and Materials: Twenty-four children and adolescents newly diagnosed with ADHD on Kiddie schedule for affective disorders and schizophrenia - present and lifetime - were prescribed medication on an outpatient basis and followed-up to check their adherence to medication. Information regarding adherence was obtained from the parents on a proforma to assess the factors affecting the adherence to medication.

Results: Twenty (83.3%) subjects were nonadherent within the first month. The most common reasons as given by the parents for nonadherence to treatment were side-effects of medication in 13 (65%), lack of effectiveness of medication in 10 (50%), problems in hospital, like long waiting time and procedural delay, in 10 (50%), fear that the child will become addicted to medication in nine (45%), problems in accessing medication in eight (40%), careless attitude of caregivers in eight (40%) and high cost of medication in eight (40%).

Conclusions: The rate of adherence to medication in this short-term follow-up of newly diagnosed children with ADHD was very low. Other than the commonly reported reasons in Western countries, there were some sociocultural and local reasons for nonadherence to treatment in our country. Efforts are needed to improve adherence to medication in children with ADHD.

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Int Clin Psychopharmacol. 2011;26:107-13.

NOREPINEPHRINE TRANSPORTER GENE (SLC6A2) IS INVOLVED WITH METHYLPHENIDATE RESPONSE IN KOREAN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.

Song J, Song DH, Jhung K, et al.

The purpose of this study was to investigate the association between the methylphenidate (MPH) response and the norepinephrine transporter (NET) gene polymorphisms in Korean children with attention deficit hyperactivity disorder (ADHD). One hundred and fourteen children with ADHD (mean age 9.08(plus or minus)1.94 years) were recruited from a child psychiatric clinic in South Korea. The genomic DNA was extracted from the blood lymphocyte. Patients were administered MPH for 8 weeks. Good response was defined as a decrease of more than 50% from the baseline ADHD rating scale-IV scores or Clinical Global Impression-Severity score was 1 or 2 after treatment. We compared the MPH response according to the genotype of G1287A of the NET gene (SLC6A2). In patients with G/G genotype, 41 patients (71.9%) showed good response and 16 patients (28.1%) showed poor response when it was measured by the ADHD rating scale-IV. In comparison, 23 patients (46.0%) with G/A genotype and four patients (57.1%) with A/A genotype showed good response (P=0.018, by the Fisher's exact test). When we compared the response of MPH between patients with G/G genotype and those without G/G genotype, 41 patients (71.9%) with G/G genotype showed good response, whereas only 27 patients (46.4%) without G/G genotype showed good response. [Pearson (chi)=7.143, degrees of freedom (df)=1, P=0.008]. Our study found a significant association between the G1287A genotype of the NET gene and the MPH response in Korean children with ADHD. These findings support the significant role of the NET gene in ADHD treatment with MPH.

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J Autism Dev Disord. 2011 Jan;41:13-22.

FUNCTIONAL EVALUATION OF HIDDEN FIGURES OBJECT ANALYSIS IN CHILDREN WITH AUTISTIC DISORDER.

Malisza KL, Clancy C, Shiloff D, et al.

Functional magnetic resonance imaging (fMRI) during performance of a hidden figures task (HFT) was used to compare differences in brain function in children diagnosed with autism disorder (AD) compared to children with attention-deficit/hyperactivity disorder (ADHD) and typical controls (TC). Overall greater functional MRI activity was observed in the two control groups compared to children with AD. Laterality differences were also evident, with AD subjects preferentially showing activity in the right medial temporal region while controls tended to activate the left medial temporal cortex. Reduced fMRI activity was observed in the parietal, ventral-temporal and hippocampal regions in the AD group, suggesting differences in the way that children with AD process the HFT.

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J Child Neurol. 2011;26:199-204.

INATTENTION, HYPERACTIVITY, IMPULSIVITY-EPIDEMIOLOGY AND CORRELATIONS: A NATIONWIDE GREEK STUDY FROM BIRTH TO 18 YEARS.

Palili A, Kolaitis G, Vassi I, et al.

We examined the prevalence of inattention, hyperactivity, and impulsivity (attention-deficit hyperactivity disorder [ADHD]-like symptoms) at 7 and 18 years in a Greek birth cohort, and associated factors. Information was derived from a representative sample of 2695 Greek individuals followed-up from birth to18 years through 3 questionnaire surveys (1983, 1990, 2001). At 7 years, the prevalence of hyperactivity was 7%, inattention 9.5%, and impulsivity 7% for all children, while a significant decrease was observed at 18 years. Adverse perinatal factors, poor academic performance, fights or quarrels with peers, comorbidity, and a higher frequency of physical punishment and accidents during childhood were found to be associated with ADHD-like symptoms at 7 years. Factors identified to be related with these symptoms at 18 years included male gender, maternal stress, smoking during pregnancy, physical punishment, and psychological problems in childhood. These longitudinal findings provide significant information for health and educational planning in Greece and other countries.

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Journal of Child Psychology and Psychiatry. 2011 Feb;52:195-203.

TIME PERCEPTION, PHONOLOGICAL SKILLS AND EXECUTIVE FUNCTION IN CHILDREN WITH DYSLEXIA AND/OR ADHD SYMPTOMS.

Gooch D, Snowling M, Hulme C.

Background: Deficits in time perception (the ability to judge the duration of time intervals) have been found in children with both attention-deficit/hyperactivity disorder (ADHD) and dyslexia. This paper investigates time perception, phonological skills and executive functions in children with dyslexia and/ or ADHD symptoms (AS).

Method: Children with dyslexia-only (n = 17), AS-only (n = 17), comorbid dyslexia + AS (n = 25), and typically developing controls (n = 42), matched for age and non-verbal ability, were assessed on measures of phonological skills, executive function and time perception (duration discrimination and time reproduction).

Results: Children with dyslexia were impaired on measures of phonological skill and duration discrimination compared to children without dyslexia (though problems on duration discrimination appeared to be attributable to mild symptoms of inattention in this group). In contrast, children with AS exhibited impairments on measures of both time perception and executive function compared to children without AS.

Children with dyslexia + AS showed an additive combination of the deficits associated with dyslexia-only and AS-only.
Conclusions: Dyslexia and AS appear to be associated with distinct patterns of cognitive deficit, which are present in combination in children with dyslexia + AS.

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Journal of Clinical Child and Adolescent Psychology. 2011 Jan;40:10-22.
PSYCHOLOGICAL SYMPTOMS IN YOUTH AND LATER SOCIOECONOMIC FUNCTIONING: DO ASSOCIATIONS VARY BY INFORMANT?
Dirks MA, Boyle MH, Georgiades K.
We examined whether associations between symptoms of attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), depression, and anxiety assessed in a sample of 2,026 youth aged 6 to 16 years and socioeconomic functioning measured 18 years later varied as a function of whether parents or teachers had rated symptomatology. After accounting for confounding variables (e.g., family socioeconomic status in childhood), psychological symptoms explained 2.78% of the variability in adult socioeconomic status. Much of that variance was unique to teachers or parents (0.90% and 1.41%, respectively). Moreover, several informant-specific associations emerged: teacher-rated depression and parent-rated ADHD and ODD were significant predictors of later socioeconomic functioning. Overall, these findings provide further evidence that differences between informants are meaningful and support the utility of maintaining the unique perspective of each rater in analytic and measurement strategies.

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J Clin Sleep Med. 2010;6:589-95.
DIFFERENCES BETWEEN OBJECTIVE AND SUBJECTIVE SLEEP MEASURES IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER.
Choi J, Yoon IY, Kim HW, et al.
Study Objectives: To assess sleep characteristics in children with ADHD through polysomnographic recordings and parental reports of sleep problems.
Methods: Standard overnight polysomnography evaluation was performed to record sleep in 27 children with ADHD and 26 healthy controls, aged 7 to 12 years. The diagnosis of ADHD was determined by the Korean version of the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL-K). Children taking any medications or in poor health were excluded. All the subjects were assessed with the Children's Sleep Habits Questionnaire which was completed by parents. Overall neurobehavioral functioning was examined using various questionnaires, including the Child Behavioral Checklist (CBCL).
Results: Based on the findings from the questionnaire, the ADHD group had significantly higher scores on the sleep onset delay ($p = 0.027$), sleep duration ($p = 0.032$), night waking ($p = 0.006$), parasomnias ($p = 0.016$), daytime sleepiness ($p = 0.007$), and total sleep disturbance factors ($p < 0.001$) than children in the control group. However, there were no differences between ADHD and healthy groups on any polysomnographic variables, including sleep structure, arousals, and respiratory disturbances. Reported sleep problems were significantly associated with almost all subscales of CBCL as well as CBCL total score.

Conclusions: The majority of sleep problems reported by the parents of ADHD children were not verified through the use of polysomnography. These findings raise the possibility that some of the reported sleep problems in ADHD may be related to disturbing behaviors which often characterize children with ADHD.

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J Intellect Disabil Res. 2011;55:109-20.

THE PREVALENCE AND PHENOMENOLOGY OF SELF-INJURIOUS AND AGGRESSIVE BEHAVIOUR IN GENETIC SYNDROMES.

Arron K, Oliver C, Moss J, et al.

Background Self-injurious and aggressive behaviours are reported as components of some behavioural phenotypes but there are few studies comparing across syndrome groups. In this study we examined the prevalence of these behaviours and the associated person characteristics in seven genetic syndromes.

Methods Questionnaire data on self-injury and aggression, mood, hyperactivity, autism spectrum disorder and repetitive behaviour were collected on Angelman (AS, n = 104), Cornelia de Lange (CdLS, 101), Cri du Chat (CdCS, 58), Fragile X (FXS, 191), Lowe (LS, 56), Prader-Willi (PWS, 189) and Smith-Magenis (SMS, 42) syndromes.

Results A significantly higher prevalence of self-injury was evident in CdCS, CdLS, FXS, PWS, LS and SMS. The prevalence of aggression was significantly heightened in AS and SMS. Self-injury was associated with repetitive and impulsive behaviour in CdLS, FXS, PWS and LS. Impulsivity and overactivity were significantly higher in those showing aggression across all syndrome groups.

Conclusions These data quantify the risk for self-injury and aggression in the syndromes studied with implications for early intervention. The associations between these behaviours and person characteristics both within and between syndromes warrant further research.

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Journal of the American Academy of Child & Adolescent Psychiatry. 2011 Jan;50:46-54.

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

Mathews CA, Grados MA.

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

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

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

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

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J Am Acad Child Adolesc Psychiatry. 2011;50:171-79.

CLONIDINE EXTENDED-RELEASE TABLETS FOR PEDIATRIC PATIENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Jain R, Segal S, Kollins SH, et al.

Objective This study examined the efficacy and safety of clonidine hydrochloride extended-release tablets (CLON-XR) in children and adolescents with attention-deficit/hyperactivity disorder (ADHD).

Method This 8-week, placebo-controlled, fixed-dose trial, including 3 weeks of dose escalation, of patients 6 to 17 years old with ADHD evaluated the efficacy and safety of CLON-XR 0.2 mg/day or CLON-XR 0.4 mg/day versus placebo in three separate treatment arms. Primary endpoint was mean change in ADHD Rating ScaleIV (ADHD-RS-IV) total score from baseline to week 5 versus placebo using a last observation carried forward method. Secondary endpoints were improvement in ADHD-RS-IV inattention and hyperactivity/impulsivity subscales, Conners Parent Rating ScaleRevised: Long Form, Clinical Global Impression of Severity, Clinical Global Impression of Improvement, and Parent Global Assessment from baseline to week 5.

Results Patients (N = 236) were randomized to receive placebo (n = 78), CLON-XR 0.2 mg/day (n = 78), or CLON-XR 0.4 mg/day (n = 80). Improvement from baseline in ADHD-RS-IV total score was significantly greater in both CLON-XR groups versus placebo at week 5. A significant improvement in ADHD-RS-IV total score occurred between groups as soon as week 2 and was maintained throughout the treatment period. In addition, improvement in ADHD-RS-IV inattention and hyperactivity/impulsivity subscales, Conners Parent Rating ScaleRevised: Long Form, Clinical Global Impression of Improvement, Clinical Global Impression of Severity, and Parent Global Assessment, occurred in both treatment groups versus placebo. The most common treatment-emergent adverse event was mild-to-moderate somnolence. Changes on electrocardiogram were minor and reflected the known pharmacology of clonidine.

Conclusions Clonidine hydrochloride extended-release tablets were generally well tolerated by patients in the study and significantly improved ADHD symptoms in this pediatric population. Clinical trials registry informationStudy Evaluating the Safety and Efficacy of Clonicel to Treat Children and Adolescents with Attention Deficit Hyperactivity Disorder (ADHD), URL: http://www.clinicaltrials.gov, unique identifier:

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Lancet. 2011;377:494-503.

EFFECTS OF A RESTRICTED ELIMINATION DIET ON THE BEHAVIOUR OF CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER (INCA STUDY): A RANDOMISED CONTROLLED TRIAL.

Pelsser LM, Frankena K, Toorman J, et al.

The effects of a restricted elimination diet in children with attention-deficit hyperactivity disorder (ADHD) have mainly been investigated in selected subgroups of patients. We aimed to investigate whether there is a connection between diet and behaviour in an unselected group of children. The Impact of Nutrition on Children with ADHD (INCA) study was a randomised controlled trial that consisted of an open-label phase with masked measurements followed by a double-blind crossover phase. Patients in the Netherlands and Belgium were enrolled via announcements in medical health centres and through media announcements. Randomisation in both phases was individually done by random sampling. In the open-label phase (first phase), children aged 4-8 years who were diagnosed with ADHD were randomly assigned to 5 weeks of a restricted elimination diet (diet group) or to instructions for a healthy diet (control group). Thereafter, the clinical responders (those with an improvement of at least 40 on the ADHD rating scale [ARS]) from the diet group proceeded with a 4-week double-blind crossover food challenge phase (second phase), in which high-IgG or low-IgG foods (classified on the basis of every child's individual IgG blood test results) were added to the diet. During the first phase, only the assessing paediatrician was masked to group allocation. During the second phase (challenge phase), all persons involved were masked to challenge allocation. Primary endpoints were the change in ARS score between baseline and the end of the first phase (masked paediatrician) and between the end of the first phase and the second phase (double-blind), and the abbreviated Conners' scale (ACS) score (unmasked) between the same timepoints. Secondary endpoints included food-specific IgG levels at baseline related to the behaviour of the diet group responders after IgG-based food challenges. The primary analyses were intention to treat for the first phase and per protocol

for the second phase. INCA is registered as an International Standard Randomised Controlled Trial, number ISRCTN 76063113. Between Nov 4, 2008, and Sept 29, 2009, 100 children were enrolled and randomly assigned to the control group (n=50) or the diet group (n=50). Between baseline and the end of the first phase, the difference between the diet group and the control group in the mean ARS total score was 23(middle dot)7 (95 CI 18(middle dot)6-28(middle dot)8; p<0(middle dot)0001) according to the masked ratings. The difference between groups in the mean ACS score between the same timepoints was 11(middle dot)8 (95 CI 9(middle dot)2-14(middle dot)5; p<0(middle dot)0001). The ARS total score increased in clinical responders after the challenge by 20(middle dot)8 (95 CI 14(middle dot)3-27(middle dot)3; p<0(middle dot)0001) and the ACS score increased by 11(middle dot)6 (7(middle dot)7-15(middle dot)4; p<0(middle dot)0001). In the challenge phase, after challenges with either high-IgG or low-IgG foods, relapse of ADHD symptoms occurred in 19 of 30 (63) children, independent of the IgG blood levels. There were no harms or adverse events reported in both phases. A strictly supervised restricted elimination diet is a valuable instrument to assess whether ADHD is induced by food. The prescription of diets on the basis of IgG blood tests should be discouraged. Foundation of Child and Behaviour, Foundation Nuts Ohra, Foundation for Children's Welfare Stamps Netherlands, and the KF Hein Foundation.

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Neuroendocrinol Lett. 2010;31:748-53.

INCREASED FRACTIONAL ANISOTROPY IN WHITE MATTER OF THE RIGHT FRONTAL REGION IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: A DIFFUSION TENSOR IMAGING STUDY.

Li Q, Sun J, Guo L, et al.

OBJECTIVE: Abnormalities of frontal white matter (WM) have been found in some children with ADHD. The purpose of this study was to explore the changes in WM in child patients with ADHD by DTI, which detects changes in WM microstructure based on properties of diffusion. We also expect to investigate the relationship between the changes in WM and executive function in child patients with ADHD.

METHODS: DTI was performed on 24 patients with ADHD and 20 healthy controls. A series of neuropsychological tests and a structural interview were conducted to assess the cognitive functions and clinical data of the ADHD patients and controls.

RESULTS: Firstly, child patients with ADHD have higher fractional anisotropy (FA) values in WM in the right frontal region. Secondly, FA in right frontal WM is positively correlated with scores in the Stroop test.

Conclusions: Increased FA of right frontal WM implies a higher degree of myelination and lower degree of neural branching in WM, contributing to the neurological deficits of ADHD.

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Neuroepidemiology. 2011;36:2-18.

VIRTUAL REALITY IN PEDIATRIC NEUROREHABILITATION: ATTENTION DEFICIT HYPERACTIVITY DISORDER, AUTISM AND CEREBRAL PALSY.

Wang M, Reid D.

This paper presents the current status and use of virtual reality (VR) for children with attention deficit hyperactivity disorder (ADHD), autism and cerebral palsy. This literature review explores how VR systems have been used as treatment tools to address the primary impairments of these disorders. Three major classes of VR display systems are identified that can be characterized by the type of human-computer interaction provided: (1) feedback-focused interaction, (2) gesture-based interaction, and (3) haptic-based interaction. The demonstrated effectiveness and potential effectiveness of each class are discussed in the context of remediating the primary impairments of children with ADHD, autism and cerebral palsy. Three major themes for future research are discussed to support continued research interest in using VR in pediatric neurorehabilitation.

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Neuropsychiatr Dis Treat. 2011;7:31-38.

TREATMENT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER WITH MONOAMINE AMINO ACID PRECURSORS AND ORGANIC CAUTION TRANSPORTER ASSAY INTERPRETATION.

Hinz M, Stein A, Neff R, et al.

Background: This paper documents a retrospective pilot study of a novel approach for treating attention deficit hyperactivity disorder (ADHD) with amino acid precursors of serotonin and dopamine in conjunction with urinary monoamine assays subjected to organic caution transporter (OCT) functional status determination. The goal of this research was to document the findings and related considerations of a retrospective chart review study designed to identify issues and areas of concern that will define parameters for a prospective controlled study.

Methods: This study included 85 patients, aged 4-18 years, who were treated with a novel amino acid precursor protocol. Their clinical course during the first 8-10 weeks of treatment was analyzed retrospectively. The study team consisted of PhD clinical psychologists, individuals compiling clinical data from records, and a statistician. The patients had been treated with a predefined protocol for administering amino acid precursors of serotonin and dopamine, along with OCT assay interpretation as indicated.

Results: In total, 67% of participants achieved significant improvement with only amino acid precursors of serotonin and dopamine. In patients who achieved no significant relief of symptoms with only amino acid precursors, OCT assay interpretation was utilized. In this subgroup, 30.3% achieved significant relief following two or three urine assays and dosage changes as recommended by the assay results. The total percentage of patients showing significant improvement was 77%.

Conclusion: The efficacy of this novel protocol appears superior to some ADHD prescription drugs, and therefore indicates a need for further studies to verify this observation. The findings of this study justify initiation of further prospective controlled studies in order to evaluate more formally the observed benefits of this novel approach in the treatment of ADHD.

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Neuropsychobiology. 2011;63:82-91.

AUTONOMIC CORRELATES AT REST AND DURING EVOKED ATTENTION IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND EFFECTS OF METHYLPHENIDATE.

Negrao BL, Bipath P, Van Der Westhuizen D, et al.

Objective: The aim of this study was to assess autonomic nervous system functioning in children with attention-deficit/hyperactivity disorder (ADHD) and to examine the effects of methylphenidate and focussed attention.

Method: Children with ADHD (n = 19) were tested while they were stimulant free and during a period in which they were on stimulants. On both occasions, autonomic nervous system functioning was tested at baseline and during focussed attention. Autonomic nervous system functioning of control subjects was also tested at baseline and during focussed attention. Autonomic nervous system activity was determined by means of heart rate variability (HRV) and skin conductivity analyses. Attention was evoked by means of the BioGraph Infiniti biofeedback apparatus. HRV was determined by time domain, frequency domain and Poincare analysis of RR interval data. Skin conductivity was determined by the BioGraph Infiniti biofeedback apparatus.

Results: The main findings of this study were (a) that stimulant-free children with ADHD showed a sympathetic underarousal and parasympathetic overarousal of the sympathovagal balance relative to control subjects; (b) methylphenidate shifted the autonomic balance of children with ADHD towards normal levels; however, a normal autonomic balance was not reached, and (c) stimulant-free children with ADHD exhibited a shift in the sympathovagal balance towards the sympathetic nervous system from baseline to focussed attention; however, methylphenidate appeared to abolish this shift.

Conclusions: Stimulant-free children with ADHD have a parasympathetic dominance of the autonomic balance, relative to control subjects. Methylphenidate attempts to restore the normal autonomic balance in children with ADHD, but inhibits the normal autonomic nervous system response to a cognitive challenge.

Clinical Applications: These results indicate that methylphenidate may have a suppressive effect on the normal stress response. Although this may be of benefit to those who interact with children who suffer from ADHD, the implications for the physiological and psychological well-being of the children themselves are debatable. Further research is needed.
Limitations of the Study: Only 19 children with ADHD and 18 control subjects were tested. Further studies should include prior testing in order to exclude children with possible co-existing learning disabilities. Cognitive function and emotional responses of children with ADHD were not tested.copyright

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Noropsikiyatr Ars. 2010;47:314-18.
QUALITY OF LIFE IN CHILDREN WITH (ATTENTION-DEFICIT HYPERACTIVITY DISORDER): A CROSS-SECTIONAL STUDY.
Yildiz O, Cakin-Memik N, Agaoglu B.
Objective: The aim of this study was to evaluate quality of life in children and adolescents with attention-deficit hyperactivity disorder (ADHD), to determine the relationship between severity of the disorder and existence of comorbidity, and to compare the results with those in healthy control group.
Methods: Forty-nine children aged 8-16 years and diagnosed with ADHD based on the Schedule for Affective Disorders and Schizophrenia for School-age Children-Turkish Version (K-SADS-PL-T) and interview for the Diagnostic and Statistical Manual of Mental Disorders-IV Edition (DSM-IV) were enrolled in the study as well as 49 healthy age- and gender-matched controls. Quality of life in all children was evaluated by the Pediatric Quality of Life Inventory (PedsQL), and symptom severity in children with ADHD was assessed by the Turgay DSM-IV-Based Child and Adolescent Behavior Disorders Screening and Rating Scale (T-DSM-IV-S).
Results: The ADHD samples showed significantly lower total scale score, school functioning and psychosocial health summary scores than the healthy children. The quality of life based on subscale scores and total scale scores, except physical health and emotional functioning scores, was found significantly lower in parents of children with ADHD than in parents of healthy children. When the relationship between ADHD symptom severity and PedsQL scores was evaluated, medium-level negative correlation was found between T-DSM-IV-S total scores and psychosocial health total score, social and school functioning scores for PedsQL filled out by parents. It was observed that 17 children with ADHD with comorbid diagnoses had significantly lower subscale scores and total scale scores for PedsQL filled out by children, except for physical health total scores and social functioning scores, compared to 32 children without comorbidity. As for the PedsQL filled out by the parents, no statistical difference was found between the scores of children with comorbidity and without comorbidity.
Conclusion: ADHD, a chronic neuropsychiatric disorder, was seen to be affecting life quality negatively based on reporting by both children and parents. It can be assumed that evaluation of life quality during observation and treatment of ADHD may become a guide to finding areas, in which children have difficulties.

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Prim Care Companion J Clin Psych. 2010;12.
METHYLPHENIDATE TRANSDERMAL SYSTEM: A MULTISITE, OPEN-LABEL STUDY OF DERMAL REACTIONS IN PEDIATRIC PATIENTS DIAGNOSED WITH ADHD.
Warshaw EM, Squires L, Li Y, et al.
Objective: To characterize dermal reactions and examine methylphenidate (MPH) sensitization in subjects receiving methylphenidate transdermal system (MTS).
Method: This multicenter, open-label, dose-optimization study utilized MTS doses of 10, 15, 20, and 30 mg in children aged 6 to 12 years, inclusive (N = 305), with a DSM-IV-TR primary diagnosis of attention-deficit/hyperactivity disorder. The study was conducted between January 8, 2007, and August 23, 2007. Subjects wore MTS on their hips for 9 hours per day, alternating sides daily for a total of 7 weeks.

Assessments included the Experience of Discomfort scale, Transdermal System Adherence scale, and Dermal Response Scale (DRS; 0 = no irritation, 7 = strong reaction). On-study reevaluations were conducted to characterize DRS scores (greater-than or equal to) 4. Epicutaneous allergy patch testing was conducted for DRS scores (greater-than or equal to) 6, persistent DRS scores (greater-than or equal to) 4, DRS score increase following an assessment of (greater-than or equal to) 4, or DRS scores of 4 or 5 following elective discontinuation.
Results: Approximately half of subjects experienced definite erythema at the patch site that generally dissipated within 24 hours. Four subjects experienced a DRS score of 4 (1%): Erythema in 1 subject resolved on study treatment, 2 cases resolved poststudy and subjects tolerated oral MPH, and 1 subject discontinued treatment. The latter subject was referred for patch testing and was diagnosed with allergic contact sensitization to MPH.
Conclusions: Few severe dermal effects were seen with MTS treatment. Dermal reactions were characterized as contact dermatitis and dissipated rapidly. On patch testing, 1 subject (0.3%) manifested sensitization to MPH.

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Psychiatr Psychol Klin. 2010;10:141-54.
Selected executive functions in children with ADHD in early school age.
Borkowska AR, Scholz B.
The study was aimed at finding out whether at the early school age the effectiveness of executive functions distinguishes children with ADHD from those of the control group. Besides, the aim was to check to what extent the use of diagnostic methods evaluating executive functions in children at the early school age is justified. The analysis comprised cognitive flexibility, sustained attention, interference control and planning ability. Those methods of neuropsychological evaluation were used which are mostly applied to characterize executive functions: Wisconsin Card Sorting Test, interference task based on the Stroop Interference Test, and tests of verbal fluency and Tower of London. The examined group consisted of 50 children aged 7-10: 25 children with hyperactivity of combined type and 25 children of the control group. Each group consisted of 23 boys and 2 girls. The average age in the criterial group was 8 years and 10 months (SD=10 months), whereas in the control group - 8 years and 6 months (SD=11 months). According to the obtained results, children with ADHD at early school age do not exhibit a wide spectrum of executive functions deficits, which is probably associated with immaturity of executive processes in all children of that age. The findings comprised only difficulties in inhibition of response, monitoring of activity, and ability of executive attention to intentional guidance of the mental effort depending on the task's requirements. In investigations of children with ADHD at early school age the use of neuropsychological tests and trials designed for evaluation of executive functions is justified only in limited degree. They do not significantly distinguish between children with ADHD and children without this disorder, therefore the results may be mainly of descriptive, and not explanatory, value.

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Psychiatr Psychol Klin. 2010;10:169-81.
TEMPERAMENTAL COMPONENTS OF IMPULSIVITY IN ADHD.
Lipowska M, Dykalska-Bieck D.
The aim of the above research was to identify the temperamental profile differentiating children with diagnosed ADHD from their friends who are not affected by developmental deficiency. Moreover, the objective was to examine whether the temperamental profile of hyperactive children can be characterized by the same specific configuration of traits. Material and method: The experimental group comprised 63 children with diagnosed ADHD (32 girls and 31 boys). The control group consisted of children without any diagnosed developmental deficiency (37 girls and 30 boys) in the age adequate to the research group (control group aged M=11.5; SD=0.9; ADHD children aged M=11.6; SD=0.4). Temperamental profile was

evaluated by means of Buss and Plomin EAS-C Temperament Questionnaire, Polish version adapted by Oniszczenko (1997) and evaluated by parents and teachers. The severity of symptoms criterial for ADHD was described with the use of Wolanczyk and Kolakowski Questionnaire for diagnosing ADHD and behavioural disorders (2005). Results: Correlates were found between the severity of ADHD symptoms and the child's specific temperamental profile. In case of hyperactive children, teachers ranked shyness significantly higher (t=-5.2; p=0.000), whereas parents ranked emotionality higher (t=5.1; p=0.000). In both examined groups the activity level was estimated as average and high (6-7 sten). It appeared that the trait differentiating the temperamental profile of children from both groups was emotionality - a higher level of this trait was indicated both by parents (t=8.6; p=0.000) and teachers (t=6.4; p=0.000). As far as the relation between particular temperamental traits and criterial ADHD dimensions is concerned, a correlation was found between emotionality and impulsivity (r=3.4; p=0.008) and hyperactivity (r=3.5; p=0.007) in parents' evaluation and impulsivity (r=3.6; p=0.004) in teachers' perception. Moreover, the teachers also emphasised the correlation between sociability and inattention (r=4.3; p=0.001). Conclusions: There is a correlation between the severity of hyperactivity symptoms and the configuration of temperamental features in children. Hyperactive children exhibit a specific temperamental profile.

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Psychiatr Psychol Klin. 2010;10:155-68.

THE SPECIFICITY OF PARENTING INTERACTION OF A MOTHER AND HER CHILD WITH ADHD .

Szaniawska M.

The study was aimed at determination of the specificity of parenting interaction of mothers of children with diagnosed attention-deficit/ hyperactivity disorder (ADHD). Its theory is underlain by Barkley's concept, conclusions derived from the interaction model describing the parenting process and results of studies on "difficult" children carried out within this model. The mother's cognitive scheme relating to the parenting interaction with the child was investigated in view of the child's representation, aiding strategy, expectations of self-reliance and efficiency of competence transmission within executive functions (the correct development of which in a child is indispensable to exercise its behaviour self-control). Two techniques from previous studies were used for this (Ziatek - a tool to measure the expected self-reliance level and Kwiatkowska - a tool to measure the aiding strategy), as well as the method of diagnosing the cognitive functions teaching process, which was created specifically for these studies (acc. to Barkley's theory). The results of the studies point to some differences in motherly representations of parenting interaction. Mothers of children with ADHD are more focussed on the child's negative traits, they do not teach their children the behavioural inhibition in an effective way, thus unwittingly contributing to increasing the deficits resulting from the child's neurodevelopmental disorders, whereas their high expectations of self-reliance assume the form of a lack of control of the child.

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Psychiatric Annals. 2011 Jan;41:9-15.

EVIDENCE-BASED PSYCHOSOCIAL TREATMENTS FOR CHILDHOOD ADHD.

Kaiser NM, Pfiffner LJ.

Attention-deficit/hyperactivity disorder is one of the most frequently diagnosed disorders of childhood and is a frequent reason for referral to child psychiatrists and psychologists and pediatricians. This article aims to improve practitioners' knowledge of the conceptual framework and current research findings behind evidence-based psychosocial interventions (behavioral and skills training approaches) and to provide general guidelines about referral for psychosocial treatments. These psychosocial treatments can be employed as first-line interventions for ADHD. Whether psychosocial interventions are employed alone or as a component of a larger treatment package, referring to and working collaboratively with a behavioral therapist can maximize the efficiency of medical providers' time with patients. This collaboration can also

improve the overall quality of care by providing families with a team of professionals who work on their behalf to implement the most effective interventions possible.

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Psychiatr Invest. 2010;7:285-90.

GENDER-SPECIFIC ASSOCIATION OF THE BRAIN-DERIVED NEUROTROPHIC FACTOR GENE WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER.

Cho SC, Kim HW, Kim BN, et al.

Objective Attention-deficit/hyperactivity disorder (ADHD) is a complex neuro developmental disorder with a strong genetic component. Brain-derived neurotrophic factor (BDNF), which participates in the differentiation and survival of dopaminergic and noradrenergic neurons, could play a role in ADHD development. We aimed to explore the relationships between ADHD and BDNF gene polymorphism.

Methods We conducted a case-control analysis of 202 ADHD subjects and 159 controls, performed a transmission disequilibrium test on 151 trios, and compared the results of a continuous performance test (CPT) according to the genotype of the three single nucleotide polymorphisms (rs11030101, rs6265, rs16917204) in the BDNF gene.

Results In the case-control analysis, the AA genotype of the BDNF rs11030101 polymorphism was significantly associated with ADHD only in girls (p=0.024, odds ratio=3.00). The T-G-G haplotype was significantly less frequent (p=0.005) and A-G-G was more frequent (p=0.048) in girls with ADHD than in control girls (global p=0.027). A multivariate analysis of variance for commission errors on the CPT showed a significant main effect for the rs11030101 genotype (p=0.026) and an interaction effect of the rs11030101 genotype and gender (p=0.032) in ADHD probands.

Conclusion These results provide preliminary evidence for a gender-specific association between BDNF and ADHD in the Korean population.

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Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation. 2011 Feb;20:31-36.

HEALTH-RELATED QUALITY OF LIFE OF IRANIAN CHILDREN WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER.

Jafari P, Ghanizadeh A, Akhondzadeh S, et al.

Background: The present study aimed to examine the psychometric properties of the Persian version of the 23-item PedsQL[sup]TM[/sup] 4.0 Generic Core Scales in Iranian children with attention deficit hyperactivity disorder (ADHD).

Methods: A clinical sample of seventy-two children aged 8–17 years with ADHD and their parents completed the questionnaire. The control group consisted of 140 children matched for age and gender selected from schools by cluster sampling method. The English language version of the PedsQL[sup]TM[/sup] 4.0 was translated into Persian. Factor analysis was conducted.

Results: Reliability analysis for the total scale score was 0.85 for the child report and it was 0.80 for parent report version. Factor loading for items of the questionnaire was very similar to its original version. The quality of life of children with ADHD was statistically lower than that of the control group.

Conclusion: The Persian version of the scales has adequate reliability and validity. The HRQOL of children with ADHD is lower than that of the control group. It is lower than that of the community sample of ADHD children from USA or children with cancer.

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Res Dev Disabil. 2011;32:520-26.

DISCRIMINATION BETWEEN ATTENTION DEFICIT HYPERACTIVITY DISORDER AND REACTIVE ATTACHMENT DISORDER IN SCHOOL AGED CHILDREN.

Follan M, Anderson S, Huline-Dickens S, et al.

We aimed to determine whether it is possible to discriminate between children with attention deficit hyperactivity disorder (ADHD) and children with reactive attachment disorder (RAD) using standardized assessment tools for RAD. The study involved 107 children: 38 with a diagnosis of RAD and 30 with ADHD were recruited through community child and adolescent mental health services (CAMHS) and specialist ADHD clinics. In addition, 39 typically developing children were recruited through family practice. Clinicians were trained to use a standardized assessment package for RAD using a DVD with brief follow-up support. Discriminant function analysis was used to identify the items in the standardized assessment package that best discriminated between children with ADHD and children with RAD. Clinicians' ratings of RAD symptoms were reliable, particularly when focusing on eight core DSM-IV symptoms of RAD. Certain parent-report symptoms were highly discriminatory between children with ADHD and children with RAD. These symptoms included " cuddliness with strangers" and " comfort-seeking with strangers" A semi-structured interview with parents, observation of the child in the waiting room and teacher report of RAD symptoms aided diagnostic discrimination between the groups. Clinical diagnosis of RAD can be made reliably by clinicians, especially when focusing on eight core RAD symptoms. Clear discrimination can be made between children with RAD and children with ADHD.

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Res Dev Disabil. 2011;32:483-90.

EFFORTFUL CONTROL IN TYPICALLY DEVELOPING BOYS AND IN BOYS WITH ADHD OR AUTISM SPECTRUM DISORDER.

Samyn V, Roeyers H, Bijttebier P.

Despite increased interest in the role of effortful control (EC) in developmental disorders, few studies have focused on EC in autism spectrum disorders (ASD) and no study so far has directly compared children with ASD and children with ADHD. A first aim of this study was to investigate whether typically developing (TD) boys, boys with ADHD and boys with ASD can be differentiated based on EC levels. A second aim was to evaluate the relationship between EC and symptoms of ADHD and ASD. We assessed EC in 27 TD boys, 27 boys with ADHD and 27 boys with ASD (age 10-15) using different EC questionnaires. Clinical groups scored lower than the TD group on all EC total scales, but could only be differentiated from each other by means of self-reported persistence, impulsivity and activation control. Our data suggest that although EC is useful in differentiating TD boys from clinical groups, it is less efficient in distinguishing ADHD from ASD. Also, results suggest that EC plays a role in the manifestation of symptoms of both ADHD and ASD and that high levels of EC enable children to function more adequate in daily situations.

3° ADHD workshop

Appropriatezza degli interventi terapeutici e farmacovigilanza

Cagliari 7-9 Aprile 2011

Ad oltre un anno dall'ADHD Workshop dell'ottobre del 2009, si terrà a Cagliari il 3° Workshop sull'ADHD. Considerando gli importanti cambiamenti in corso (termine della fase di farmacovigilanza intensiva, modifica significativa delle attività del Registro Nazionale, possibile nascita di Registri Regionali, possibili novità nella farmacoterapia del disturbo), anche questa terza edizione sarà *intensamente interattiva***.**

Come nella seconda edizione, il workshop è articolato in *Letture*, *Simposi* e *Poster*, cui si in questa nuova edizione si aggiungeranno i "*Dibattiti*.

In ogni *Simposio*, un facilitatore presenterà una breve relazione sullo stato dell'arte e sui problemi aperti; i rappresentanti di diversi Centri presenteranno le proprie esperienze (interventi preordinati), mentre un *discussant* stimolerà la discussione tra tutti i partecipanti e cercherà, insieme al facilitatore, di individuare aspetti condivisi, criticità ed indicazioni per il futuro.

***Dibattiti* della durata di 90 minuti, saranno caratterizzati dalla breve presentazioni di due tesi contrapposte (15 minuti ciascuna) su uno specifico argomento definito da una domanda a risposta chiusa (SI/NO), da 30 minuti di discussione stimolata da un *discussant*, seguita da una breve replica finale (5 minuti) di ogni presentatore e dalle conclusioni del *discussant* e del *facilitatore* (i pochi minuti restanti). Il *facilitatore* garantirà la gestione degli interventi e la tenuta strettissima dei tempi per garantire la vivacità e completezza della discussione.**

Il workshop è finalizzato alla definizione di strategie innovative per la gestione pratica della diagnosi e la terapia dei bambini ed adolescenti con ADHD, estendibili, possibilmente, ad altri disturbi neuropsichiatrici del'età evolutiva.

Giovedi 7 Aprile

11.30 Saluti e Presentazione del Workshop

12.00 14.00 Letture: **Chairmen Carlo Cianchetti, *Cagliari,* Bernardo Carpiniello (*Cagliari*)**

12.00. Il registro Nazionale tre anni dopo: risultati e prospettive. **Pietro Panei, *Roma***

Discussant Paolo Stagi, *Modena*

13.00 L'ADHD nell'adulto **Giulio Perugi, *Pisa***

Discussant: Gabriele Masi, *Pisa*

14.00 Pausa

14.30 16.15 Simposio*

Diagnosi e comorbidità Complesse

Facilitatore* Monica Saccani, *Milano

Intervengono:*Cristina Porfirio, *Roma,* Maria Pia Legge, *Avezzano,

Laura Reale, *Catania,* Daniele Arisi, *Cremona,* Simona Chiodo, *Bologna*

16.15 - 17.45 Dibattito

E' veramente difficile far diagnosi di ADHD?

Facilitatore	**Francesca Ragazzo, *Savignano, CN***
SI	**Maria Giulia Torrioli, *Roma***
No	**Donatella Arcangeli, *Merano***
Discussant	**Lilla Bravaccio, *Napoli***

17.45 - 18.45 Lettura: **Chairman: Maurizio Bonati, *Milano,***

17.30. Approcci critici alle comorbidità: Disturbi dello spettro autistico, Disturbo bipolare in età prepubere **Gabriele Masi, *Pisa***

***Discussant* Giuseppe Chiarenza**

Venerdi 8 Aprile

8.30 10.30 Letture **Chairman, Massimo Molteni, *Lecco*, Maria del Zompo, *Cagliari***

8.30 Modelli neuropsicologici e interventi psico-educativi per l'ADHD **Stefano Vicari, *Roma* *Discussant*: Tiziana Serra, *Cagliari***
9.30 Implicazioni cliniche e neurobiologiche della genetica nell'era dei *'Genome Wide Association Scan*' **Pierandrea Muglia, *Copenhagen, DK***
Discussant*: Maria Nobile, *Lecco
10.30.-12.00 Simposio*:
Neuropsicologia e interventi psicoeducativi (presentazione e discussione di casi clinici)
Facilitatore*: Silvana Cremaschi *Udine
Intervengono:* Mariella Allegretti, *Terni,* Paola Morosini, *Lodi,
Rosa Maria Siracusano, *Messina,* Federica Fini, *Macerata*
Discussant* Stefano Palazzi, *Ferrara
12.00 Pausa
13.00 Lettura ***Chairman* Alessandro Zuddas, *Cagliari***
Sviluppo del Sistema dopaminergico e malattie neuropsichiatriche **Umberto di Porzio, *Napoli***
Discussant* Walter Adriani, *Roma
14.00 15.30 Dibattito
Gli interventi psicoeducativi strutturati (es. parent & child training, etc) sono significativamente più efficaci della psico-educazione informale (es. counseling) nel migliorare i sintomi di ADHD?
Facilitatore* Alessandra Tiberti, *Brescia
SI Stefania Millepiedi, *Empoli (FI)*
No Dino Maschietto, *San Donà del Piave (VE)*
Discussant* Antonella Costantino, *Milano

Sabato 9 Aprile

8.30 Lettura. ***Chairman* Gabriele Masi, *Pisa***
Terapie Farmacologiche per l'ADHD: nuove molecole, nuove formulazioni.
Sono realmente necessarie? **Alessandro Zuddas**
Discussant* Maurizio Bonati, *Milano
9.30 – 11.15 Simposio*
Efficacia e sicurezza dei farmaci per l'ADHD
Facilitatore*. Lucia Margari, *Bari
Intervengono* Annalisa Capuano, *Napoli,* Paola Effredi, *Brescia,* Fulvio Guccione, *Alessandria,* Luciano Montaldi, *Rho, MI,* Luigi Mazzone , *Roma
Discussant* Aldo Skabar, *Trieste
11.15 pausa
11.45 - 13.15 Dibattito
E' ancora utile la prosecuzione di programmi formali di farmacovigilanza attiva per i farmaci per l'ADHD?
Facilitatore* Pietro Panei, *Roma
SI Sara Carucci, *Cagliari*
No Angelo Massagli, *Ostuni*
Discussant* Maurizio Bonati, *Milano
13.15 Questionari
I Poster saranno esposti durante tutto il workshop e discussi nel corso dei singoli simposi.
***presentazione e discussione di dati di ricerca e casi clinici**

Informazioni Utili

Sede del Workshop
Sala Congressi Centro Comunale d'Arte e Cultura
***Il Ghetto*,**
Via Santa Croce 18

09124 Cagliari
Comitato Scientifico
Maurizio Bonati (*Istituto Mario Negri, Milano*)
Antonella Costantino (*IRCCS Osp. Maggiore Policlinico, Mangiagalli, Regina Elena, Milano*)
Gabriele Masi (*IRCCS "Stella Maris", Calambrone-Pisa*)
Pietro Panei (*Istituto Superiore di Sanità, Roma*)
Alessandro Zuddas (*Università di Cagliari*)
Segreteria Scientifica
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Centro Terapie Farmacologiche in Neuropsichiatria
dell'Infanzia e dell'Adolescenza
Azienda Ospedaliero-Universitaria di Cagliari
& Dipartimento di Neuroscienze, Università degli Studi di Cagliari
Via Ospedale 119
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Quota di iscrizione € 250 (IVA inclusa)
La quota di iscrizione da diritto a:

- **partecipazione ai lavori del workshop**
- **file delle presentazioni e dei poster**
- **coffe breaks**
- **attestato di partecipazione**

E' stato richiesto l'accreditamento ECM per neuropsichiatri infantili, psichiatri, pediatri, farmacologi clinici e psicologi.

INFO e ISCRIZIONI
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www.aidaiassociazione.com
e sul sito regionale
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COMUNE DI FIRENZE

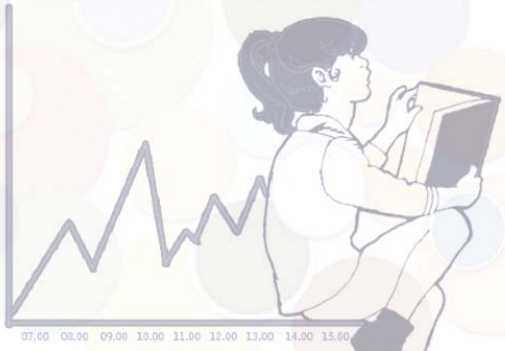
Convegno

Attenzione e Disattenzione

dalle basi neurofisiologiche ai modelli di intervento a scuola

Sabato 16 aprile 2011

Firenze, Palazzo Vecchio - Salone dei Cinquecento



Il Convegno si propone come evento formativo e di aggiornamento scientifico sull'importante tema delle difficoltà di attenzione nei bambini in età scolare.

Assessorato all'Educazione del Comune di Firenze

In collaborazione con:
GIUNTI Scuola

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Sara Pezzica
Psicologa Psicoterapeuta, Presidente AIDAI Toscana
Facoltà di Psicologia Università di Firenze
Tamara Zappaterra
Ricercatore e Docente Pedagogia Speciale
Facoltà di Scienze della Formazione
Università di Firenze

MATTINA
8,00 – Registrazione partecipanti

9,00 - Saluti delle Autorità:
Rosa Maria Di Giorgi - Assessore all' Educazione Comune di Firenze
Stella Targetti – Vicepresidente Regione Toscana. Scuola Università e Ricerca
Roberto Leonetti - Azienda Sanitaria Firenze
Annalisa Monti - Segretario SINPIA Regione Toscana
Andrea Smorti - Preside Facoltà di Psicologia Università di Firenze

9,40 - Presentazione Convegno:
Sara Pezzica
Moderatore: Luciano Luccherino

10,00 Giuseppe Cossu
Lezione magistrale Disturbi dell'Attenzione e Funzioni Esecutive: Fondamenti Neurocognitivi
11,10 - Lucia Bigozzi -
Il ruolo dell'attenzione negli apprendimenti scolastici

11,50 - Daniele Fedeli
L'intervento cognitivo-comportamentale tra scuola e famiglia

12,30 - Dibattito

POMERIGGIO
14,30 - Saluti di:
Silvia Juliani - Referente AIFA Regione Toscana
Laura Bertolo - Referente AIRIPA Regione Toscana

Moderatore: Michele Margheriti

15,00 - Fabio Celi
Formazione, ricerca e interventi psicoeducativi a scuola

16,10 - Tamara Zappaterra
Formare gli insegnanti a gestire l'attenzione in classe

16,50 - Gianluca Perticone Simona Caracciolo
Progetto Le Chiavi della Città "Dove sta la mia attenzione? Il training di meta attenzione in classe"

17,20 - Cinzia Cinelli - Ins. Scuola Primaria Statale "Niccolini" Firenze
Olga Camiciottoli - Ins. Scuola dell'Infanzia Statale "Villamagna" Firenze
Progetto Le Chiavi della Città - "La nostra attenzione, un anno dopo"

17,40 - Sara Pezzica
Conclusioni

18,00 – 19,00
Assemblea soci Aidai-Toscana

L'OFFERTA TERAPEUTICA SUL TERRITORIO

Psichiatria infantile, assistenza inadeguata

L'Oms ha documentato che in una percentuale variabile tra il 7 e il 10% tutti i bambini e adolescenti sono esposti al rischio di una malattia psichiatrica; è solo per pregiudizio o semplicemente per ignoranza, quindi, se la malattia mentale è ritenuta esclusiva dell'età adulta.

Le cronache, del resto, ci sommergono di notizie sul disagio giovanile, spesso nelle sue forme più estreme come il suicidio o l'abuso di sostanze tossiche. La depressione, l'ansia, l'anoressia e la bulimia, i disturbi della condotta, le psicosi a insorgenza anche precocissima sono patologie molto frequenti il cui esordio può essere improvviso quanto imprevisto. Alcune condizioni di sofferenza psichica nei ragazzi possono poi produrre quadri talmente pronunciati sul piano comportamentale da far considerare il ricorso urgente al ricovero. In alcuni casi, infatti, la condizione clinica presentata dal bambino o dall'adolescente può necessitare di un intervento medico specialistico sia per la definizione diagnostica e dei trattamenti, sia per il subentrare di condizioni di massima gravità e di emergenza non altrimenti gestibili. In questi casi il ricovero rappresenta un fattore di cura e di protezione del minore indispensabile rispetto a un rischio attuale o evolutivo per la sua salute.

Negli ultimi anni il fenomeno ha assunto dimensioni sempre più rilevanti: i dati Istat 2006 parlano infatti di un notevole aumento a livello nazionale del numero di ricoveri di minori per disturbi psichiatrici dal 1999 al 2003. Inoltre, nella sola Regione Lazio nel 2005 il totale degli accessi al pronto soccorso di minori con diagnosi psichiatrica è stato di circa 2.500 casi.

Va peraltro sottolineata la ormai cronica carenza di strutture sanitarie nel nostro Paese dedicate alla cura di disturbi psichiatrici in età evolutiva e la conseguente assenza di risposte assistenziali adeguate. Basti pensare che in tutta Italia il numero dei posti letto dedicati alla Psichiatria infantile è pari a 79 e, di questi, 12 sono nel Lazio (di cui 6 all'Ospedale Bambino Gesù), mentre ci sono intere Regioni completamente sprovviste. La conseguenza più frequente a questo stato di cose è che il minore con disturbo psichiatrico acuto trova ricovero in strutture non specialistiche, dalla Pediatria ai servizi psichiatrici per adulti, con cure inadeguate e spesso traumatiche.

Troppi pregiudizi sull'uso dei farmaci

Ma se quindi la malattia psichiatrica esiste anche in età evolutiva, come curarla? Due i presidi principali: la psicoterapia e i farmaci. Di fronte a questa verità occorre però superare il pregiudizio di psicoterapia = buono, farmaco = cattivo. È, infatti, persino troppo evidente che questi strumenti non hanno una loro natura di per sé, ma è piuttosto l'uso che ne facciamo a renderli utili, inutili o, addirittura, dannosi. Per quanto poco credibile, perché viola un pregiudizio molto diffuso, anche la psicoterapia può essere inutile o addirittura dannosa. Di certo è sempre molto costosa e quindi riservata a pochi non esistendo, di fatto, centri sul territorio nazionale capaci di erogare psicoterapia in modo gratuito e continuativo. Allo stesso tempo l'uso dei farmaci può essere di grande aiuto, talvolta assolutamente risolutivo, rapido e di basso costo.

Un altro stereotipo è che i bambini italiani siano grandi consumatori di psicofarmaci. In realtà il consumo di farmaci attivi sul sistema nervoso centrale è, nel nostro Paese, in riduzione progressiva. Un esempio è rappresentato dal Disturbo di attenzione e iperattività, meglio noto con l'acronimo inglese di Adhd: i bambini e gli adolescenti in trattamento con farmaci per la cura dell'Adhd sono circa 2.000 in tutta Italia (dati Iss) a fronte di un bisogno, calcolato sulla base di dati epidemiologici, di almeno 50.000 casi. In altre parole, l'allarme lanciato da molte associazioni e che sembra essere raccolto persino da alcune proposte di legge in discussione in Parlamento, riguarda una esigua minoranza di bambini, tutti costantemente monitorati, giunti al trattamento farmacologico seguendo un iter codificato e controllato direttamente dall'Iss mediante un apposito Registro nazionale.

La malattia psichiatrica del bambino pone una grande sfida ai medici, ai genitori e a chi ha responsabilità di salute pubblica: per vincerla occorre una forte alleanza tra tutte queste componenti. Anche superando stereotipi consolidati quando non basati su fondamenti scientifici, si potrà consentire un miglioramento del livello delle cure e una vita migliore dei bambini e delle loro famiglie. L'alternativa è il deserto del silenzio, del fai da te e dello stigma.

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

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